

PUBLICATIONS

A) Original Publications

- 1) R. Tacke, U. Wannagat, Sila-Analoga des Mephenhydramins, *Monatsh. Chem.* **106**, 1005-1018 (1975).
- 2) R. Tacke, U. Wannagat, Sila-Analoga des Chlorphenoxamins und des Clofenetamins, *Monatsh. Chem.* **107**, 111-123 (1976).
- 3) R. Tacke, U. Wannagat, Sila-Analoga des Mebrophenhydramins, *Monatsh. Chem.* **107**, 439-447 (1976).
- 4) R. Tacke, U. Wannagat, Sila-Analogon des Cicloniumbromids, *Monatsh. Chem.* **107**, 449-458 (1976).
- 5) R. Tacke, U. Wannagat, Derivate des Sila-Mephenhydramins und Sila-Chlorphenoxamins, *Monatsh. Chem.* **107**, 1265-1270 (1976).
- 6) R. Tacke, U. Wannagat, Isoelektronische Derivate des Sila-Clofenetamins und des Sila-Mebrophenhydramins, *Monatsh. Chem.* **107**, 1271-1279 (1976).
- 7) R. Tacke, U. Wannagat, N-Quaternäre Derivate basischer Sila-benzhydryläther, *Arch. Pharm. (Weinheim)* **310**, 714-719 (1977).
- 8) R. Tacke, Sila-Analoga des Meflophenhydramins, *Arch. Pharm. (Weinheim)* **310**, 719-728 (1977).
- 9) S. M. Saad, R. Tacke, Zur Darstellung von 1,1,3,3-Tetramethyl-1,3-disila-2,4,7-trioxa-cycloheptan (1) und 1,1,3,3-Tetramethyl-1,3-disila-2,4,8-trioxa-cyclooctan (2), *Chemiker-Ztg.* **101**, 262 (1977).
- 10) S. M. Saad, R. Tacke, Silylation of cellulose, *Indian Textile Journal* **1977**, 117-119.
- 11) R. Tacke, R. Niedner, Darstellung und Eigenschaften potentiell curarewirksamer

- Silicium-Verbindungen, I, *Z. Naturforsch.* **33b**, 412-416 (1978).
- 12) R. Tacke, E. Zimonyi-Hegedüs, U. Wannagat, Si–C-Spaltung in 2-Thienylsilanen durch sekundäre Amine, *J. Organomet. Chem.* **172**, 21-29 (1979).
 - 13) R. Tacke, M. Strecker, W. S. Sheldrick, E. Heeg, B. Berndt, K. M. Knapstein, Darstellung und Eigenschaften sowie Kristall- und Molekülstruktur von Sila-Difenidol, *Z. Naturforsch.* **34b**, 1279-1285 (1979).
 - 14) L. Steiling, R. Tacke, U. Wannagat, Diphenyl(3-piperidinopropyl)silanol, ein Sila-Analogon des Difenidols, *Liebigs Ann. Chem.* **1979**, 1554-1559.
 - 15) R. Tacke, I. Haller, H.-J. Zeiler, Sila-Analoga der Antiseptica Octafoniumchlorid und p-tert-Butylphenol, *Eur. J. Med. Chem.* **14**, 399-406 (1979).
 - 16) J. Ackermann, R. Tacke, U. Wannagat, U. Koke, F. Meyer, Derivate des 1-(4-Chlorphenyl)silacyclohexans mit 3-(Diethylamino)propyl- und 2-(Diethylamino)ethyl-Gruppierungen, *Liebigs Ann. Chem.* **1979**, 1915-1924.
 - 17) J. Ackermann, R. Tacke, U. Wannagat, U. Koke, F. Meyer, Sila-Analoga des Chlorphencyclans, *Arch. Pharm. (Weinheim)* **313**, 129-141 (1980).
 - 18) R. Tacke, A. Bentlage, R. Towart, H. Meyer, F. Bossert, W. Vater, K. Stoepel, Sila-Analoga von Nifedipin-ähnlichen 4-Aryl-2.6-dimethyl-1.4-dihydropyridin-3.5-dicarbonsäure-dialkylestern, I, *Z. Naturforsch.* **35b**, 494-501 (1980).
 - 19) R. Tacke, E. Heeg, B. Berndt, Sila-Analogon des Rythmols, *Arch. Pharm. (Weinheim)* **313**, 142-155 (1980).
 - 20) R. Tacke, M. Strecker, W.S. Sheldrick, L. Ernst, E. Heeg, B. Berndt, C.-M. Knapstein, R. Niedner, Sila-Pridinol und Pridinol: Darstellung und Eigenschaften sowie Strukturen im kristallinen und gelösten Zustand, *Chem. Ber.* **113**, 1962-1980 (1980).
 - 21) R. Tacke, E. Zimonyi-Hegedüs, M. Strecker, E. Heeg, B. Berndt, R. Langner, Sila-Analogon des Tiemoniumiodids, *Arch. Pharm. (Weinheim)* **313**, 515-526 (1980).
 - 22) R. Tacke, R. Niedner, J. Frohnecke, L. Ernst, W. S. Sheldrick, Darstellung und Eigenschaften potentiell curarewirksamer Silicium-Verbindungen, II, *Liebigs Ann. Chem.* **1980**, 1859-1876.
 - 23) R. Tacke, M. Strecker, R. Niedner, Cholinesterase-hemmende Organophosphorsäureester und ihre Sila-Analoga, *Liebigs Ann. Chem.* **1981**, 387-395.
 - 24) D. Wiese, R. Tacke, U. Wannagat, 9,9-Dimethyl-10-(3-dimethylaminopropyl)-9-silaacridan, ein Sila-Analogon des Dimetacrins, und strukturverwandte Verbindungen, *Liebigs Ann. Chem.* **1981**, 1285-1293.
 - 25) D. Wrobel, R. Tacke, U. Wannagat, U. Harder, Sila-Analoga tertiärer Carbinole mit

- Duftwirkung, *Chem. Ber.* **115**, 1694-1704 (1982).
- 26) R. Tacke, A. Bentlage, W. S. Sheldrick, L. Ernst, R. Towart, K. Stoepel, Sila-Analoga von Nifedipin-ähnlichen 4-Aryl-2,6-dimethyl-1,4-dihydropyridin-3,5-dicarbonsäure-dialkylestern, II, *Z. Naturforsch.* **37b**, 443-450 (1982).
- 27) R. Tacke, R. Niedner, J. Frohnecke, Darstellung und Eigenschaften potentiell curarewirksamer Silicium-Verbindungen, IV, *Liebigs Ann. Chem.* **1982**, 1706-1711.
- 28) R. Tacke, H. Lange, A. Bentlage, Synthese und Eigenschaften von (Hydroxymethyl)diorganysilanen, *Chem. Ber.* **115**, 3673-3677 (1982).
- 29) R. Tacke, H. Linoh, M. T. Attar-Bashi, W. S. Sheldrick, L. Ernst, R. Niedner, J. Frohnecke, Darstellung und Eigenschaften potentiell curarewirksamer Silicium-Verbindungen, III, *Z. Naturforsch.* **37b**, 1461-1471 (1982).
- 30) R. Tacke, H. Lange, M. T. Attar-Bashi, Baseninduzierte 1,2-Hydridverschiebungen vom Silicium zum Kohlenstoff: „Anomale“ Substitutionsreaktionen an (Halogenmethyl)diorganysilanen, *Liebigs Ann. Chem.* **1982**, 1946-1951.
- 31) R. Tacke, H. Lange, A. Bentlage, W. S. Sheldrick, L. Ernst, 2,2,5,5-Tetraorganyl-1,4-dioxa-2,5-disilacyclohexane, *Z. Naturforsch.* **38b**, 190-193 (1983).
- 32) R. Tacke, A. Bentlage, R. Towart, E. Möller, Sila-analogues of nifedipine-like dialkyl 2,6-dimethyl-4-aryl-1,4 dihydropyridine-3,5-dicarboxylates, III, *Eur. J. Med. Chem.* **18**, 155-161 (1983).
- 33) R. Tacke, H. Linoh, B. Stumpf, W.-R. Abraham, K. Kieslich, L. Ernst, Mikrobiologische Umwandlung von Silicium-Verbindungen: Enantioselektive Reduktion von Acetessigsäure-(trimethylsilylalkyl)estern und deren Carba-Analoga, *Z. Naturforsch.* **38b**, 616-620 (1983).
- 34) R. Tacke, H. Lange, W. S. Sheldrick, G. Lambrecht, U. Moser, E. Mutschler, Synthese, Struktur und pharmakologische Eigenschaften von Diphenyl(2-piperidinoethoxymethyl)silanol und seinem Kohlenstoff-Analogon, *Z. Naturforsch.* **38b**, 738-746 (1983).
- 35) R. Tacke, M. Strecker, G. Lambrecht, U. Moser, E. Mutschler, (2-Aminoethyl)cycloalkylphenylsilanole: Bioisosterer C/Si-Austausch bei Parasympatholytika vom Typ des Trihexyphenidyls, Cycrimins und Procyclidins, *Liebigs Ann. Chem.* **1983**, 922-930.
- 36) R. Tacke, H. Lange, Thermisch induzierte Umlagerung von (Acyloxymethyl)diorganysilanen, *Chem. Ber.* **116**, 3685-3691 (1983).
- 37) R. Tacke, M. Strecker, G. Lambrecht, U. Moser, E. Mutschler, Bioisosterer C/Si-Austausch bei Parasympatholytika vom Typ des Pridinols, *Arch. Pharm. (Weinheim)* **317**, 207-214 (1984).

- 38) R. Tacke, M. Link, A. Bentlage-Felten, H. Zilch, Zum thermischen Verhalten einiger Kohlensäure[(methylphenylsilyl)methyl]ester-Derivate, *Z. Naturforsch.* **40b**, 942-947 (1985).
- 39) W. S. Sheldrick, H. Linoh, R. Tacke, G. Lambrecht, U. Moser, E. Mutschler, Crystal and molecular structures of the (*R*)-enantiomer and the racemate of the antimuscarinic agent (cyclohexyl)phenyl[2-(pyrrolidin-1-yl)ethyl]silanol (sila-procyclidine), *J. Chem. Soc. Dalton Trans.* **1985**, 1743-1746.
- 40) R. Tacke, M. Link, H. Zilch, Eine neue *in situ*-Darstellung von (Trimethylsilyl)trifluormethansulfonat durch thermisch induzierte Umlagerung, *Chem. Ber.* **118**, 4637-4640 (1985).
- 41) R. Tacke, H. Linoh, H. Zilch, J. Wess, U. Moser, E. Mutschler, G. Lambrecht, Synthese und Eigenschaften des selektiven Antimuskarinikums Cyclohexylphenyl(3-piperidinopropyl)silanol, *Liebigs Ann. Chem.* **1985**, 2223-2228.
- 42) R. Tacke, H. Linoh, D. Schomburg, L. Ernst, U. Moser, E. Mutschler, G. Lambrecht, Zur absoluten Konfiguration der Enantiomere der Antimuskarinika Procyclidin und Tricyclamoliodid: Röntgenstrukturanalyse von (*R*)-1-[3-Cyclohexyl-3-hydroxy-3-phenylpropyl]-1-methylpyrrolidiniumiodid, *Liebigs Ann. Chem.* **1986**, 242-250.
- 43) R. Tacke, A. Bentlage-Felten, H. Linoh, S. Magda, Sila-Analoga des Triparanols und Ethamoxytriphetols: Synthese sowie pharmakologische und toxikologische Eigenschaften, *Z. Naturforsch.* **41b**, 649-654 (1986).
- 44) R. Tacke, M. Link, H. Joppien, L. Ernst, Sila-Substitution des Akarizids Fenbutatinoxid und einiger seiner Derivate: Synthese und Eigenschaften von Hexakis[(dimethylphenylsilyl)methyl]distannoxan und Tris[(dimethylphenylsilyl)methyl](1,2,4-triazol-1-yl)stannan, *Z. Naturforsch.* **41b**, 1123-1128 (1986).
- 45) H. Zilch, R. Tacke, Fluorid-induzierte Fragmentierung von Acetyldimethylphenylsilan, *J. Organomet. Chem.* **316**, 243-247 (1986).
- 46) R. Tacke, J. Pikies, H. Linoh, R. Rohr-Aehle, S. Gönne, Sila-Procyclidin: Eine neue Synthese sowie Untersuchungen zur peripheren und zentralen anticholinergen Wirkung, *Liebigs Ann. Chem.* **1987**, 51-57.
- 47) R. Tacke, H. Linoh, L. Ernst, U. Moser, E. Mutschler, S. Sarge, H. K. Cammenga, G. Lambrecht, Darstellung und Eigenschaften der Enantiomere der Antimuskarinika Sila-Procyclidin und Sila-Tricyclamol-iodid: Optisch aktive Silanole mit Silicium als Chiralitätszentrum, *Chem. Ber.* **120**, 1229-1237 (1987).
- 48) C. Syldatk, H. Andree, A. Stoffregen, F. Wagner, B. Stumpf, L. Ernst, H. Zilch,

- R. Tacke, Enantioselective reduction of acetyldimethylphenylsilane by *Trigonopsis variabilis* (DSM 70714), *Appl. Microbiol. Biotechnol.* **27**, 152-158 (1987).
- 49) D. Schomburg, M. Link, H. Linoh, R. Tacke, Molekülstruktur der Akarizide Chlortrineophylstannan, Chlortris[(dimethylphenylsilyl)methyl]stannan und Trineophyl(1,2,4-triazol-1-yl)stannan-hemihydrat sowie des 2,5-Dimethyl-2,5-diphenylhexans (Bineophyl), *J. Organomet. Chem.* **339**, 69-80 (1988).
- 50) S. Sarge, H. K. Cammenga, B. Becker, R. Rohr-Aehle, R. Tacke, Energetic and kinetic investigation of thermally induced molecular rearrangements of esters of (hydroxymethyl)hydridosilanes by DSC, *J. Thermal Analysis* **33**, 1185-1192 (1988).
- 51) G. Lambrecht, G. Gmelin, K. Rafeiner, C. Strohmann, R. Tacke, E. Mutschler, *o*-Methoxy-sila-hexocyclium: a new quaternary M₁-selective muscarinic antagonist, *Eur. J. Pharmacol.* **151**, 155-156 (1988).
- 52) G. Lambrecht, R. Feifel, B. Forth, C. Strohmann, R. Tacke, E. Mutschler, *p*-Fluoro-hexahydro-sila-difenidol: the first M_{2B}-selective muscarinic antagonist, *Eur. J. Pharmacol.* **152**, 193-194 (1988).
- 53) R. Tacke, R. Rohr-Aehle, Ester des (Hydroxymethyl)[(trimethylsilyl)methyl]silans: Synthese und thermisch induzierte Umlagerung, *J. Organomet. Chem.* **354**, 139-146 (1988).
- 54) R. Tacke, B. Becker, Synthese und Eigenschaften von (Hydroxymethyl)-dimethylgerman und (Hydroxymethyl)diphenylgerman, *J. Organomet. Chem.* **354**, 147-153 (1988).
- 55) C. Syldatk, A. Stoffregen, F. Wuttke, R. Tacke, Enantioselective reduction of acetyldimethylphenylsilane: a screening with thirty strains of microorganisms, *Biotechnol. Letters* **10**, 731-736 (1988).
- 56) M. Eltze, G. Gmelin, J. Wess, C. Strohmann, R. Tacke, E. Mutschler, G. Lambrecht, Presynaptic muscarinic receptors mediating inhibition of neurogenic contractions in rabbit vas deferens are of the ganglionic M₁-type, *Eur. J. Pharmacol.* **158**, 233-242 (1988).
- 57) R. Tacke, H. Linoh, K. Rafeiner, G. Lambrecht, E. Mutschler, Synthese und Eigenschaften des selektiven Antimuscarinikums Sila-Hexocyclium-methylsulfat, *J. Organomet. Chem.* **359**, 159-168 (1989).
- 58) R. Tacke, K. Rafeiner, C. Strohmann, E. Mutschler, G. Lambrecht, Synthesis of the selective antimuscarinic agent 4-{[cyclohexylhydroxy(2-methoxyphenyl)silyl]methyl}-1,1-dimethylpiperazinium methyl sulfate (*o*-methoxy-sila-hexocyclium methyl sulfate),

- Appl. Organomet. Chem.* **3**, 129-132 (1989).
- 59) R. Tacke, B. Becker, D. Schomburg, The synthesis and the crystal and molecular structure of the fungicide bis(4-fluorophenyl)methyl(1*H*-1,2,4-triazol-1-yl-methyl)silane (flusilazole, DPX H 6573), *Appl. Organomet. Chem.* **3**, 133-139 (1989).
- 60) M. Waelbroeck, M. Tastenoy, J. Camus, J. Christophe, C. Strohmann, H. Linoh, H. Zilch, R. Tacke, E. Mutschler, G. Lambrecht, Binding and functional properties of antimuscarinics of the hexocyclium/sila-hexocyclium and hexahydro-difenidol/hexahydro-sila-difenidol type to muscarinic receptor subtypes, *Br. J. Pharmacol.* **98**, 197-205 (1989).
- 61) R. Tacke, C. Strohmann, S. Sarge, H. K. Cammenga, D. Schomburg, E. Mutschler, G. Lambrecht, Darstellung und Eigenschaften der Enantiomere des selektiven Antimuscarinikums 1-Cyclohexyl-1-phenyl-4-piperidino-1-butanol (Hexahydro-Difenidol), *Liebigs Ann. Chem.* **1989**, 137-143.
- 62) K. Fritsche, C. Syldatk, F. Wagner, H. Hengelsberg, R. Tacke, Enzymatic resolution of *rac*-1,1-dimethyl-1-sila-cyclohexan-2-ol by ester hydrolysis or transesterification using a crude lipase preparation of *Candida cylindracea*, *Appl. Microbiol. Biotechnol.* **31**, 107-111 (1989).
- 63) G. Lambrecht, R. Feifel, M. Wagner-Röder, C. Strohmann, H. Zilch, R. Tacke, M. Waelbroeck, J. Christophe, H. Boddeke, E. Mutschler, Affinity profiles of hexahydro-sila-difenidol analogues at muscarinic receptor subtypes, *Eur. J. Pharmacol.* **168**, 71-80 (1989).
- 64) A. Pfeiffer, H. Rochlitz, B. Noelke, R. Tacke, U. Moser, E. Mutschler, G. Lambrecht, Muscarinic receptors mediating acid secretion in isolated rat gastric parietal cells are of M3 type, *Gastroenterology* **98**, 218-222 (1990).
- 65) R. Kopp, G. Lambrecht, E. Mutschler, U. Moser, R. Tacke, A. Pfeiffer, Human HT-29 colon carcinoma cells contain mucarinic M₃ receptors coupled to phosphoinositide metabolism, *Eur. J. Pharmacol. Mol. Pharmacol. Sect.* **172**, 397-405 (1989).
- 66) E. J. Verspohl, R. Tacke, E. Mutschler, G. Lambrecht, Muscarinic receptor subtypes in rat pancreatic islets: binding and functional studies, *Eur. J. Pharmacol.* **178**, 303-311 (1990).
- 67) R. Feifel, M. Wagner-Röder, C. Strohmann, R. Tacke, M. Waelbroeck, J. Christophe, E. Mutschler, G. Lambrecht, Stereoselective inhibition of muscarinic receptor subtypes by the enantiomers of hexahydro-difenidol and acetylenic analogues, *Br. J. Pharmacol.* **99**, 455-460 (1990).

- 68) H. Fuder, J. Schöpf, J. Unckell, M. T. Wesner, C. Melchiorre, R. Tacke, E. Mutschler, G. Lambrecht, Different muscarine receptors mediate the prejunctional inhibition of [³H]-noradrenaline release in rat or guinea-pig iris and the contraction of the rabbit iris sphincter muscle, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **340**, 597-604 (1989).
- 69) R. Tacke, H. Hengelsberg, H. Zilch, B. Stumpf, Enantioselective microbial reduction of 1,1-dimethyl-1-sila-cyclohexan-2-one with growing cells of the yeast *Kloeckera corticis* (ATCC 20109), *J. Organomet. Chem.* **379**, 211-216 (1989).
- 70) N. M. Rettenmayr, J. F. Rodrigues de Miranda, N. V. M. Rijntjes, F. G. M. Russel, C. A. M. van Ginneken, C. Strohmann, R. Tacke, G. Lambrecht, E. Mutschler, Pharmacokinetic properties of the antimuscarinic drug [³H]-hexahydro-sila-difenidol in the rat, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **342**, 146-152 (1990).
- 71) M. Waelbroeck, J. Camus, M. Tastenoy, G. Lambrecht, E. Mutschler, R. Tacke, J. Christophe, Stereoselectivity of procyclidine binding to muscarinic receptor subtypes M₁, M₂ and M₄, *Eur. J. Pharmacol. Mol. Pharmacol. Sect.* **189**, 135-142 (1990).
- 72) C. Polidori, M. Massi, G. Lambrecht, E. Mutschler, R. Tacke, C. Melchiorre, Selective antagonists provide evidence that M₁ muscarinic receptors may mediate carbachol-induced drinking in the rat, *Eur. J. Pharmacol.* **179**, 159-165 (1990).
- 73) R. Tacke, K. Fritsche, A. Tafel, F. Wuttke, Synthese von racemischem Acetyl(*t*-butyl)methylphenylsilan und Acetylmethylphenyl[(trimethylsilyl)methyl]silan: Substrate für stereoselektive mikrobielle Reduktionen, *J. Organomet. Chem.* **388**, 47-55 (1990).
- 74) R. Tacke, B. Becker, H. Lange, (Thioacetoxy-*S*-methyl)diorganylsilane und (Mercaptomethyl)diorganylsilane: Synthese und Eigenschaften, *J. Organomet. Chem.* **388**, 57-62 (1990).
- 75) F. Dörje, T. Friebe, R. Tacke, E. Mutschler, G. Lambrecht, Novel pharmacological profile of muscarinic receptors mediating contraction of the guinea-pig uterus, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **342**, 284-289 (1990).
- 76) R. Feifel, J. F. Rodrigues de Miranda, C. Strohmann, R. Tacke, A. J. Aasen, E. Mutschler, G. Lambrecht, Selective labelling of muscarinic M₁ receptors in calf superior cervical ganglia by [³H](±)-telenzepine, *Eur. J. Pharmacol.* **195**, 115-123 (1991).
- 77) R. Tacke, F. Wiesenberger, (Acetoxymethyl)methylphenylgerman: Synthese, thermisches Verhalten und olfaktorische Eigenschaften, *Z. Naturforsch.* **46b**, 275-279 (1991).

- 78) C. Strohmann, R. Tacke, G. Mattern, W. F. Kuhs, Bis(2,3-naphthalindiolato)[2-(pyrrolidinio)ethyl]silicat: Synthese und strukturelle Charakterisierung eines zwitterionischen λ^5 -Spirosilicates, *J. Organomet. Chem.* **403**, 63-71 (1991).
- 79) R. Tacke, S. Brakmann, F. Wuttke, J. Fooladi, C. Syltatk, D. Schomburg, Stereoselective microbial reduction of racemic acetyl(t-butyl)methylphenylsilane by *Trigonopsis variabilis* (DSM 70714) and *Corynebacterium dioxydans* (ATCC 21766), *J. Organomet. Chem.* **403**, 29-41 (1991).
- 80) F. Dörje, J. Wess, G. Lambrecht, R. Tacke, E. Mutschler, M. R. Brann, Antagonist binding profiles of five cloned human muscarinic receptor subtypes, *J. Pharmacol. Exp. Ther.* **256**, 727-733 (1991).
- 81) M. Waelbroeck, J. Camus, M. Tastenoy, E. Mutschler, C. Strohmann, R. Tacke, G. Lambrecht, J. Christophe, Binding affinities of hexahydro-difenidol and hexahydro-sila-difenidol analogues at four muscarinic receptor subtypes: constitutional and stereochemical aspects, *Eur. J. Pharmacol. Mol. Pharmacol. Sect.* **206**, 95-103 (1991).
- 82) M. Waelbroeck, J. Camus, M. Tastenoy, E. Mutschler, C. Strohmann, R. Tacke, G. Lambrecht, J. Christophe, Stereoselectivity of (R)- and (S)-hexahydro-difenidol binding to neuroblastoma M₁, cardiac M₂, pancreatic M₃, and striatum M₄ muscarinic receptors, *Chirality* **3**, 118-123 (1991).
- 83) A. Pfeiffer, C. Hanack, R. Kopp, R. Tacke, U. Moser, E. Mutschler, G. Lambrecht, M. Herawi, Human gastric mucosa expresses glandular M₃ subtype of muscarinic receptors, *Dig. Dis. Sci.* **35**, 1468-1472 (1990).
- 84) C. Strohmann, S. Bauerecker, H. K. Cammenga, P. G. Jones, E. Mutschler, G. Lambrecht, R. Tacke, Enantiomers of the muscarinic antagonist 1-cyclohexyl-1-(4-fluorophenyl)-4-piperidino-1-butanol (*p*-fluoro-hexahydro-difenidol): synthesis, absolute configuration, and enantiomeric purity, *Liebigs Ann. Chem.* **1991**, 523-527.
- 85) R. Tacke, J. Sperlich, C. Strohmann, G. Mattern, Bis[2,3-naphthalindiolato(2-)](pyrrolidiniomethyl)silicat-Acetonitril-Solvat: Synthese sowie Kristall- und Molekülstruktur eines zwitterionischen λ^5 -Spirosilicates, *Chem. Ber.* **124**, 1491-1496 (1991).
- 86) N. Jaiswal, G. Lambrecht, E. Mutschler, R. Tacke, K. U. Malik, Pharmacological characterization of the vascular muscarinic receptors mediating relaxation and contraction in rabbit aorta, *J. Pharmacol. Exp. Ther.* **258**, 842-850 (1991).
- 87) H. Hengelsberg, R. Tacke, K. Fritsche, C. Syltatk, F. Wagner, Synthesis and enantioselective enzymatic hydrolysis of *rac*-dimethylphenyl[1-(phenylacetamido)-

- ethyl]silane, *J. Organomet. Chem.* **415**, 39-45 (1991).
- 88) R. Tacke, K. Mahner, C. Strohmann, B. Forth, E. Mutschler, T. Friebe, G. Lambrecht, Cyclohexyl(4-fluorophenyl)(3-piperidinopropyl)silanol (*p*-fluoro-hexahydro-siladifenidol, *p*-F-HHSiD) and derivatives: synthesis and antimuscarinic properties, *J. Organomet. Chem.* **417**, 339-353 (1991).
- 89) R. Tacke, J. Sperlich, C. Strohmann, B. Frank, G. Mattern, Bis[3,4,5,6-tetrabrom-1,2-benzoldiolato(2-)](pyrrolidiniomethyl)silicat-Acetonitril-Solvat [(C₆Br₄O₂)₂Si-CH₂(H)NC₄H₈ CH₃CN]: Synthese sowie Kristall- und Molekülstruktur eines zwitterionischen λ⁵-Spirosilicats, *Z. Kristallogr.* **199**, 91-98 (1992).
- 90) R. Tacke, F. Wuttke, H. Henke, Zur Stereochemie der mikrobiellen Reduktion von *rac*-Acetyl(*t*-butyl)methylphenylsilan mit *Trigonopsis variabilis* (DSM 70714) und *Corynebacterium dioxydans* (ATCC 21766): Aufklärung der absoluten Konfiguration der Biotransformationsprodukte (Si*R*,*CR*)- und (Si*S*,*CR*)-*t*-Butyl(1-hydroxyethyl)-methylphenylsilan, *J. Organomet. Chem.* **424**, 273-280 (1992).
- 91) R. Tacke, F. Wiesenberger, B. Becker, R. Rohr-Aehle, P. B. Schneider, U. Ulbrich, S. M. Sarge, H. K. Cammenga, T. Koslowski, W. von Niessen, Ester von (Hydroxymethyl)diorganylsilanen: Synthese und thermisch induzierte Umlagerung, *Chem. Ber.* **125**, 591-605 (1992).
- 92) R. Tacke, H. Hengelsberg, E. Klingner, H. Henke, Synthese der Si-funktionellen Acetylsilane *t*Bu(Me₃SiCH₂)[MeC(O)]SiF und *t*Bu(Me₃SiCH₂)[MeC(O)]SiH sowie Synthese und Kristallstruktur des Acetylsilanol *t*Bu(Me₃SiCH₂)[MeC(O)]SiOH: Substrate für mikrobielle Reduktionen, *Chem. Ber.* **125**, 607-612 (1992).
- 93) E. Bungardt, E. Vockert, R. Feifel, U. Moser, R. Tacke, E. Mutschler, G. Lambrecht, A. Surprenant, Characterization of muscarinic receptors mediating vasodilation in guinea-pig ileum submucosal arterioles by the use of computer-assisted videomicroscopy, *Eur. J. Pharmacol.* **213**, 53-61 (1992).
- 94) R. Tacke, F. Wiesenberger, A. Lopez-Mras, J. Sperlich, G. Mattern, Neuartige zwitterionische λ⁵-Spirosilicate: Synthese und Kristallstruktur von Bis[1,2-benzoldiolato(2-)] [2-(dimethylammonio)phenyl]silicat sowie Synthese von Bis[2,3-naphthalindiolato(2-)] [2-(dimethylammonio)phenyl]silicat-Hemiacetonitril-Solvat, *Z. Naturforsch.* **47b**, 1370-1376 (1992).
- 95) R. Tacke, J. Becht, G. Mattern, W. F. Kuhs, Zur Existenz zwitterionischer λ⁵-(Ammonioorganyl)tetrafluorosilicate: Synthese sowie Kristall- und Molekülstruktur von

- Tetrafluoro(pyrrolidiniomethyl)silicat, *Chem. Ber.* **125**, 2015-2018 (1992).
- 96) R. Tacke, B. Becker, D. Berg, W. Brandes, S. Dutzmann, S. Schaller, Bis(4-fluorophenyl)methyl(1*H*-1,2,4-triazol-1-yl-methyl)germane, a germanium analogue of the agricultural fungicide flusilazole: synthesis and biological properties, *J. Organomet. Chem.* **438**, 45-55 (1992).
- 97) M. Waelbroeck, J. Camus, M. Tastenoy, E. Mutschler, C. Strohmann, R. Tacke, L. Schjelderup, A. Aasen, G. Lambrecht, J. Christophe, Stereoselective interaction of procyclidine, hexahydro-difenidol, hexbutinol and oxyphencyclimine, and of related antagonists, with four muscarinic receptors, *Eur. J. Pharmacol. Mol. Pharmacol. Sect.* **227**, 33-42 (1992).
- 98) R. Tacke, A. Lopez-Mras, W. S. Sheldrick, A. Sebald, Synthesen, Einkristall-Röntgenstrukturanalysen und ²⁹Si-Festkörper-NMR-Untersuchungen eines zwitterionischen λ⁵-Spirosilicats und eines käfigartigen Octa(silasesquioxans), *Z. Anorg. Allg. Chem.* **619**, 347-358 (1993).
- 99) R. Tacke, A. Lopez-Mras, J. Sperlich, C. Strohmann, W. F. Kuhs, G. Mattern, A. Sebald, Neue zwitterionische λ⁵-Spirosilicate: Synthesen, Einkristall-Röntgenstrukturanalysen und Festkörper-NMR-Untersuchungen, *Chem. Ber.* **126**, 851-861 (1993).
- 100) R. Tacke, A. Lopez-Mras, J. Becht, W. S. Sheldrick, Synthese sowie Kristall- und Molekülstruktur von Tetrafluoro[2-(pyrrolidinio)ethyl]silicat, *Z. Anorg. Allg. Chem.* **619**, 1012-1016 (1993).
- 101) M. Waelbroeck, J. Camus, M. Tastenoy, G. Lambrecht, E. Mutschler, M. Kropfgans, J. Sperlich, F. Wiesenberger, R. Tacke, J. Christophe, Thermodynamics of antagonist binding to rat muscarinic M₂ receptors: antimuscarinics of the pridinol, sila-pridinol, diphenidol and sila-diphenidol type, *Br. J. Pharmacol.* **109**, 360-370 (1993).
- 102) R. Tacke, J. Becht, A. Lopez-Mras, W. S. Sheldrick, A. Sebald, Synthesen, X-ray crystal structure analyses, and solid-state NMR studies of some zwitterionic organofluorosilicates, *Inorg. Chem.* **32**, 2761-2766 (1993).
- 103) M. Eltze, B. Ullrich, E. Mutschler, U. Moser, E. Bungardt, T. Friebe, C. Gubitz, R. Tacke, G. Lambrecht, Characterization of muscarinic receptors mediating vasodilation in rat perfused kidney, *Eur. J. Pharmacol.* **238**, 343-355 (1993).
- 104) R. Tacke, S. A. Wagner, S. Brakmann, F. Wuttke, U. Eilert, L. Fischer, C. Syldatk, Synthesis of acetyldimethyl(phenyl)silane and its enantioselective conversion into (*R*)-(1-hydroxyethyl)dimethyl(phenyl)silane by plant cell suspension cultures of *Symphytum*

- officinale* L. and *Ruta graveolens* L., *J. Organomet. Chem.* **458**, 13-17 (1993).
- 105) R. Tacke, J. Pikies, F. Wiesenberger, L. Ernst, D. Schomburg, M. Waelbroeck, J. Christophe, G. Lambrecht, J. Gross, E. Mutschler, Sila-biperiden und *endo*-Sila-biperiden: Synthesen, Kristallstrukturen und antimuscarinische Eigenschaften, *J. Organomet. Chem.* **466**, 15-27 (1994).
- 106) J. Sperlich, J. Becht, M. Mühleisen, S. A. Wagner, G. Mattern, R. Tacke, Zwitterionische Bis[*vic*-arendiolato(2-)][(morpholinio)alkyl]silicate: Synthese sowie strukturelle Charakterisierung in Lösung und im Kristall, *Z. Naturforsch.* **48b**, 1693-1706 (1993).
- 107) M. Waelbroeck, J. Camus, M. Tastenoy, R. Feifel, E. Mutschler, R. Tacke, C. Strohmam, K. Rafeiner, J. F. Rodrigues de Miranda, G. Lambrecht, Binding and functional properties of hexocyclium and sila-hexocyclium derivatives to muscarinic receptor subtypes, *Br. J. Pharmacol.* **112**, 505-514 (1994).
- 108) R. Tacke, S. A. Wagner, J. Sperlich, Synthese von (-)-(Acetoxymethyl)(hydroxymethyl)methyl(phenyl)german [(-)-MePhGe(CH₂OAc)(CH₂OH)] durch eine Esterase-katalysierte Umesterung: Die erste enzymatische Synthese eines optisch aktiven Germans, *Chem. Ber.* **127**, 639-642 (1994).
- 109) R. Tacke, J. Sperlich, B. Becker, Bis[2,3-naphthalenediolato(2-)](pyrrolidiniomethyl)germanate-tetartoacetonitrile, the first zwitterionic λ^5 -germanate: synthesis and crystal structure analysis, *Chem. Ber.* **127**, 643-646 (1994).
- 110) R. Tacke, M. Kropfgans, A. Tafel, F. Wiesenberger, W. S. Sheldrick, E. Mutschler, H. Egerer, N. Rettenmayr, J. Gross, M. Waelbroeck, G. Lambrecht, (Hydroxymethyl)diphenyl(piperidinoalkyl)silane des Typs (HOCH₂)(C₆H₅)₂Si(CH₂)_nNC₅H₁₀ (*n* = 2,3) und deren Methiodide: Synthese, Struktur und antimuscarinische Eigenschaften, *Z. Naturforsch.* **49b**, 898-910 (1994).
- 111) R. Tacke, A. Lopez-Mras, P. G. Jones, Syntheses, crystal structure analyses, and NMR studies of [2-(dimethylammonio)phenyl]bis[glycolato(2-)-O¹,O²]silicate and related zwitterionic spirocyclic λ^5 Si-silicates, *Organometallics* **13**, 1617-1623 (1994).
- 112) R. Tacke, M. Mühleisen, P. G. Jones, Das erste zwitterionische, optisch aktive Disilicat mit pentakoordiniertem Silicium, *Angew. Chem.* **106**, 1250-1252 (1994); The first zwitterionic, optically active disilicate with pentacoordinate silicon, *Angew. Chem. Int. Ed. Engl.* **33**, 1186-1188 (1994).
- 113) R. Tacke, M. Mühleisen, Hexakoordiniertes Silicium in einer molekularen Verbindung

- mit einer F_5SiC -Einheit, *Angew. Chem.* **106**, 1431-1432 (1994); Hexacoordinate silicon in a compound with an F_5SiC unit, *Angew. Chem. Int. Ed. Engl.* **33**, 1359-1360 (1994).
- 114) M. Mühleisen, R. Tacke, Twofold deprotonated citric acid as a bidentate ligand of pentacoordinate silicon: synthesis and structural characterization of the zwitterionic λ^5Si -spirosilicate bis[citrato(2-)- O^3, O^4][(dimethylammonio)methyl]silicate hydrate, *Chem. Ber.* **127**, 1615-1617 (1994).
- 115) M. Mühleisen, R. Tacke, *meso*-[1,4-Piperaziniumdiylbis(methylene)]bis{bis[2-methyl-lactato(2-)- O^1, O^2]silicate} octahydrate: synthesis and crystal structure analysis of a zwitterionic dispirocyclic $\lambda^5Si, \lambda^5Si'$ -disilicate, *Organometallics* **13**, 3740-3742 (1994).
- 116) R. Tacke, M. Mühleisen, Bis[benzilato(2-)- O^1, O^2][2-(dimethylammonio)ethoxy]-silicate: synthesis and structural characterization of a zwitterionic λ^5Si -silicate with a SiO_5 framework, *Inorg. Chem.* **33**, 4191-4193 (1994).
- 117) L. Fischer, S. A. Wagner, R. Tacke, Preparation of enantiomerically pure (*R*)-(1-hydroxyethyl)dimethyl(phenyl)silane using resting cells of *Saccharomyces cerevisiae* (DHW S-3) as biocatalyst, *Appl. Microbiol. Biotechnol.* **42**, 671-674 (1995).
- 118) R. Tacke, D. Reichel, M. Kropfgans, P. G. Jones, E. Mutschler, J. Gross, X. Hou, M. Waelbroeck, G. Lambrecht, Biological recognition of enantiomeric silanes: syntheses and antimuscarinic properties of optically active (2-aminoethyl)cyclohexyl(hydroxymethyl)phenylsilanes and related quaternary ammonium derivatives, *Organometallics* **14**, 251-262 (1995).
- 119) R. Tacke, D. Reichel, K. Günther, S. Merget, The first liquid-chromatographic separation of the (*R*)- and (*S*)-enantiomers of a chiral silanol, silane and germane, *Z. Naturforsch.* **50b**, 568-572 (1995).
- 120) R. Tacke, M. Mühleisen, A. Lopez-Mras, W. S. Sheldrick, Synthesen und Kristallstrukturanalysen neuer zwitterionischer spirocyclischer (Ammonioorganyl)bis[*vic*-arendiolato(2-)]silicate: Untersuchungen zur Struktur der λ^5Si -Koordinationspolyeder, *Z. Anorg. Allg. Chem.* **621**, 779-788 (1995).
- 121) R. Tacke, D. Terunuma, A. Tafel, M. Mühleisen, B. Forth, M. Waelbroeck, J. Gross, E. Mutschler, T. Friebe, G. Lambrecht, Fluorine-containing derivatives of the muscarinic antagonists sila-pridinol and sila-difenidol: syntheses and antimuscarinic properties, *J. Organomet. Chem.* **501**, 145-154 (1995).
- 122) R. Tacke, B. Forth, M. Waelbroeck, J. Gross, E. Mutschler, G. Lambrecht, Unsaturated derivatives of the muscarinic antagonists hexahydro-sila-difenidol (HHSiD) and *p*-

- fluoro-hexahydro-sila-difenidol (*p*-F-HHSiD) with an (*E*)-Si—CH=CH—CH₂—N moiety: syntheses and binding affinities at muscarinic receptor subtypes, *J. Organomet. Chem.* **505**, 73-79 (1995).
- 123) R. Tacke, D. Reichel, P. G. Jones, X. Hou, M. Waelbroeck, J. Gross, E. Mutschler, G. Lambrecht, Pharmacological discrimination between enantiomeric germanes by muscarinic receptors: a study on germanium/silicon bioisosterism, *J. Organomet. Chem.* **521**, 305-323 (1996).
- 124) R. Tacke, J. Becht, O. Dannappel, R. Ahlrichs, U. Schneider, W. S. Sheldrick, J. Hahn, F. Kiesgen, Zwitterionic λ^5 Si-organofluorosilicates of the formula types F₄SiCH₂NMe₂R and F₃MeSiCH₂NMe₂R (R = H, Me) and related compounds: synthesis, structure, and dynamic behavior, *Organometallics* **15**, 2060-2077 (1996).
- 125) R. Tacke, J. Heermann, M. Pülm, Zwitterionic bis[citrato(2-)-*O*³,*O*⁴](morpholinio-methyl)germanate hydrate and its silicon analogue: syntheses and crystal structure analyses, *Organometallics* **16**, 5648-5652 (1997).
- 126) M. Pülm, R. Tacke, [(Dimethylammonio)methyl]bis[*cis*-1,2-diphenylethene-1,2-diolato(2-)]silicate: the first zwitterionic spirocyclic λ^5 Si-silicate containing *cis*-ethene-1,2-diolato(2-) ligands, *Organometallics* **16**, 5664-5668 (1997).
- 127) B. Pfrommer, R. Tacke, A zwitterionic pentacoordinate silicon compound with an SiO₂N₂C framework, *Eur. J. Inorg. Chem.* **1998**, 415-418.
- 128) R. Tacke, J. Heermann, B. Pfrommer, The first zwitterionic dinuclear germanium(IV) complex with pentacoordinate germanium atoms: synthesis and crystal structure analysis, *Inorg. Chem.* **37**, 2070-2072 (1998).
- 129) R. Tacke, J. Heermann, M. Pülm, I. Richter, (Ammoniomethyl)bis[salicylato(2-)-*O*¹,*O*²]silicates: zwitterionic spirocyclic λ^5 Si-silicates with two six-membered SiO₂C₃ ring systems, *Organometallics* **17**, 1663-1668 (1998).
- 130) R. Tacke, U. Kosub, S. A. Wagner, R. Bertermann, S. Schwarz, S. Merget, K. Günther, Enzymatic transformation and liquid-chromatographic separation as methods for the preparation of the (*R*)- and (*S*)-enantiomers of the centrochiral hydridogermanes *p*-XC₆H₄(H)Ge(CH₂OAc)CH₂OH (X = H, F), *Organometallics* **17**, 1687-1699 (1998).
- 131) R. Tacke, J. Heermann, M. Pülm, Pentafluoro[(4-methyl-1,4-bisazoniacyclohex-1-yl)-methyl]germanate hydrate: synthesis and crystal structure of a zwitterionic λ^6 Ge-germanate with a GeF₅C framework, *Z. Naturforsch.* **53b**, 535-539 (1998).
- 132) R. Tacke, B. Pfrommer, K. Lunkenheimer, R. Hirte, Zwitterionic (ammoniomethyl)-tetrafluorosilicates of the formula type F₄SiCH₂NH₂(CH₂)_{*n*}Me (*n* = 5–11) and

- $F_4SiCH_2NMe_2(CH_2)_5Me$: a new class of highly efficient surface-active compounds, *Organometallics* **17**, 3670-3676 (1998).
- 133) R. Tacke, J. Heermann, M. Pülm, E. Gottfried, A zwitterionic λ^5Si -silicate with an almost ideal square-pyramidal Si coordination polyhedron: synthesis and crystal structure analysis, *Monatsh. Chem.* **130**, 99-107 (1999).
- 134) R. Tacke, R. Bertermann, A. Biller, O. Dannappel, M. Pülm, R. Willeke, Syntheses, stereochemistry, and dynamic behavior of chiral zwitterionic (ammoniomethyl)-bis[glycolato(2-)- O^1, O^2]silicates, *Eur. J. Inorg. Chem.* **1999**, 795-805.
- 135) R. Tacke, B. Pfrommer, M. Pülm, R. Bertermann, New chiral zwitterionic λ^5Si -silicates with an SiO_5 or SiO_4C framework: syntheses, crystal structures, and properties, *Eur. J. Inorg. Chem.* **1999**, 807-816.
- 136) R. Tacke, M. Pülm, I. Richter, B. Wagner, R. Willeke, New zwitterionic spirocyclic λ^5Si -silicates with two ethane-1,2-diolato(2-), oxalato(2-), or benzene-1,2-diolato(2-) ligands — synthesis, structure, and dynamic behavior, *Z. Anorg. Allg. Chem.* **625**, 2169-2177 (1999).
- 137) M. Pülm, J. Becht, R. Tacke, Singly charged λ^6Si -silicate anions with an SiF_5C skeleton: syntheses and crystal structure analyses of the ionic hexacoordinate silicon compounds $[Me_3NH][F_5SiCH_2NMe_2H] \cdot H_2O$ and $[Me_3NH][F_5SiCH_2NMe_3] \cdot H_2O$, *Z. Naturforsch.* **55b**, 60-64 (2000).
- 138) V. I. Handmann, M. Merget, R. Tacke, Sila-substitution of the α -amino acid proline: synthesis of *rac*- and (*R*)-4,4-dimethyl-4-sila-proline ethyl ester, *Z. Naturforsch.* **55b**, 133-138 (2000).
- 139) R. Tacke, R. Bertermann, A. Biller, O. Dannappel, M. Penka, M. Pülm, R. Willeke, Zwitterionic spirocyclic λ^5Si -silicates with two bidentate acetohydroximato(2-) or benzohydroximato(2-) ligands: synthesis, structure, and dynamic stereochemistry, *Z. Anorg. Allg. Chem.* **626**, 1159-1173 (2000).
- 140) D. Kost, I. Kalikhman, S. Krivonos, R. Bertermann, C. Burschka, R. E. Neugebauer, M. Pülm, R. Willeke, R. Tacke, New zwitterionic pentacoordinate silicates with $SiONFC_2$, $SiONF_2C$, and SiO_2N_2C frameworks: synthesis, structure, and dynamic stereochemistry, *Organometallics* **19**, 1083-1095 (2000).
- 141) R. Tacke, A. Stewart, J. Becht, C. Burschka, I. Richter, Di[(hydroxyalkyl)dimethylammonium] tris[benzene-1,2-diolato(2-)]silicates and their germanium analogs: syntheses, crystal structure analyses, and NMR studies, *Can. J. Chem.* **78**, 1380-1387 (2000).

- 142) R. Tacke, M. Merget, R. Bertermann, M. Bernd, T. Beckers, T. Reissmann, Syntheses and properties of silicon- and germanium-containing α -amino acids and peptides: a study on C/Si/Ge Bioisosterism, *Organometallics* **19**, 3486-3497 (2000).
- 143) R. Bertermann, R. Tacke, Solid-state ^{29}Si VACP/MAS NMR studies of silicon-accumulating plants: structural characterization of biosilica deposits, *Z. Naturforsch.* **55b**, 459-461 (2000).
- 144) V. I. Handmann, R. Bertermann, C. Burschka, R. Tacke, New bicyclic sila-heterocycles: syntheses and crystal structure analyses of *rac*-7-ethoxy-2,2-diorganyl-2,3,5,7a-tetrahydro-1*H*-3a,6-diaza-2-sila-inden-4-ones, *J. Organomet. Chem.* **613**, 19-25 (2000).
- 145) R. Tacke, C. Burschka, I. Richter, B. Wagner, R. Willeke, Pentacoordinate silicon compounds with SiO_5 skeletons containing SiOH or SiOSi groups: derivatives of the pentahydroxosilicate(1-) Anion $[\text{Si}(\text{OH})_5]^-$ and its anhydride $[(\text{HO})_4\text{Si}-\text{O}-\text{Si}(\text{OH})_4]^{2-}$, *J. Am. Chem. Soc.* **122**, 8480-8485 (2000).
- 146) R. Tacke, B. Ulmer, B. Wagner, M. Arlt, A novel silicon-based linkage and cleavage strategy for solid-phase synthesis: formation of resin-linked zwitterionic pentacoordinate silicates as the key step and release of the target molecules in a traceless fashion, *Organometallics* **19**, 5297-5309 (2000).
- 147) R. Tacke, M. Willeke, M. Penka, Synthesis and structural characterization of cationic complexes with hexacoordinate silicon(IV) and three bidentate 1-oxopyridine-2-olato(1-) ligands, *Z. Anorg. Allg. Chem.* **627**, 1236-1240 (2001).
- 148) M. Merget, K. Günther, M. Bernd, E. Günther, R. Tacke, Syntheses of racemic and non-racemic silicon- and germanium-containing α -amino acids of the formula type $\text{H}_2\text{NCH}(\text{CH}_2\text{ElR}_3)\text{COOH}$ (El = Si, Ge; R = organyl) and incorporation of D- $\text{H}_2\text{NCH}(\text{CH}_2\text{SiMe}_3)\text{COOH}$ and D- $\text{H}_2\text{NCH}(\text{CH}_2\text{GeMe}_3)\text{COOH}$ into biologically active decapeptides: a study on C/Si/Ge bioisosterism, *J. Organomet. Chem.* **628**, 183-194 (2001).
- 149) R. Tacke, M. Mallak, R. Willeke, Pentacoordination of silicon by four covalent Si-S bonds and one covalent Si-C bond, *Angew. Chem.* **113**, 2401-2403 (2001); *Angew. Chem. Int. Ed.* **40**, 2339-2341 (2001).
- 150) R. Tacke, R. Bertermann, O. Dannappel, R. E. Neugebauer, M. Pülm, R. Willeke, Monocyclic zwitterionic $\lambda^5\text{Si}$ -silicates with an SiO_2FC_2 framework: syntheses and structural characterization in the solid state and in solution, *Inorg. Chem.* **40**, 2520-2527 (2001).
- 151) R. Willeke, R. Tacke, Zwitterionic $\lambda^5\text{Si}$ -silicates with $\text{SiO}_2\text{S}_2\text{C}$ skeletons: syntheses and

- structural characterization in the solid state, *Z. Anorg. Allg. Chem.* **627**, 1537-1541 (2001).
- 152) R. Tacke, C. Burschka, M. Willeke, R. Willeke, Neutral mononuclear and binuclear hexacoordinate silicon complexes with SiO_5C skeletons, *Eur. J. Inorg. Chem.* **2001**, 1671-1674.
- 153) R. Tacke, C. Burschka, J. Heermann, I. Richter, B. Wagner, R. Willeke, Macrocyclic siloxanes with two exocyclic *trans*-silanol and two exocyclic *trans*-amino functions – stereoselective syntheses and structures, *Eur. J. Inorg. Chem.* **2001**, 2211-2215.
- 154) M. Willeke, K. Lunkenheimer, R. Tacke, Zwitterionic [(4-*n*-alkyl-1,4-bisazoniacyclohex-1-yl)methyl]pentafluorosilicates: a new class of surface-active compounds with a hexacoordinate silicon atom, *Z. Anorg. Allg. Chem.* **627**, 2517-2522 (2001).
- 155) M. Merget, R. Bertermann, B. Wagner, R. Tacke, Novel tricyclic sila-heterocycles: syntheses and crystal structure analyses of *rac*-2,8-diethoxy-6,6-diorganyl-3,9-diaza-6-silatricyclo[5.2.1.0^{4,8}]dec-2-enes, *Organometallics* **20**, 3650-3654 (2001).
- 156) R. Tacke, T. Kornek, T. Heinrich, C. Burschka, M. Penka, M. Pülm, C. Keim, E. Mutschler, G. Lambrecht, Syntheses and pharmacological characterization of achiral and chiral enantiopure C/Si/Ge-analogous derivatives of the muscarinic antagonist cycrimine: a study on C/Si/Ge bioisosterism, *J. Organomet. Chem.* **640**, 140-165 (2001).
- 157) I. Richter, C. Burschka, R. Tacke, Octakis[(2,2,6,6-tetramethylpiperidino)methyl]-octasilsesquioxane: synthesis and crystal structure analysis of a new aminoorganyl-functionalized octasilsesquioxane, *J. Organomet. Chem.* **646**, 200-203 (2002).
- 158) R. Tacke, T. Schmid, C. Burschka, M. Penka, H. Surburg, Syntheses, structures, and sensory characteristics of the perfume ingredient majantol and its analogs sila-majantol and germa-majantol: a study on C/Si/Ge bioisosterism, *Organometallics* **21**, 113-120 (2002).
- 159) R. Tacke, T. Heinrich, Syntheses of enantiopure Si-centrochiral silicon-based muscarinic antagonists using an enantioselective enzymatic esterification as the key step, *Silicon Chem.* **1**, 35-39 (2002).
- 160) J. O. Daiss, S. Duda-Johner, C. Burschka, U. Holzgrabe, K. Mohr, R. Tacke, N⁺/Si replacement as a tool for probing the pharmacophore of allosteric modulators of muscarinic M₂ receptors: synthesis, allosteric potency, and positive cooperativity of silicon-based W84 derivatives, *Organometallics* **21**, 803-811 (2002).
- 161) R. Tacke, M. Penka, F. Popp, I. Richter, Bis[citrato(3-)-O¹,O³,O⁶]silicate: a dianionic complex with hexacoordinate silicon(IV) and two tridentate dioato(2-)olato(1-) ligands,

- Eur. J. Inorg. Chem.* **2002**, 1025-1028.
- 162) R. Tacke, V. I. Handmann, Derivatives of β -(trimethylsilyl)alanine with SiCH₂NH₂, SiCH₂OH, or SiCH₂SH functionality: synthesis of the silicon-containing α -amino acids *rac*- and (*R*)-Me₂Si(CH₂R)CH₂CH(NH₂)COOH (R = NH₂, OH, SH), *Organometallics* **21**, 2619-2626 (2002).
- 163) A. Biller, C. Burschka, M. Penka, R. Tacke, Dianionic complexes with hexacoordinate silicon(IV) or germanium(IV) and three bidentate ligands of the hydroximato(2-) type: syntheses and structural characterization in the solid state, *Inorg. Chem.* **41**, 3901-3908 (2002).
- 164) R. Tacke, J. Heermann, M. Penka, I. Richter, B. Wagner, Improved synthesis of HOPh₂Si-SiPh₂OH and crystal structure analyses of HOPh₂Si-SiPh₂OH and HOPh₂Si-SiPh₂-O-Ph₂Si-SiPh₂OH·1/2C₆H₆, *Z. Naturforsch.* **57b**, 731-735 (2002).
- 165) I. Richter, M. Penka, R. Tacke, The hexacoordinate silicate dianions *mer*-tris[glycolato(2-)-O¹,O²]silicate and *fac*-tris[benzilato(2-)-O¹,O²]silicate: syntheses and structural characterization, *Inorg. Chem.* **41**, 3950-3955 (2002).
- 166) I. Richter, M. Penka, R. Tacke, [Benzene-1,2-diolato(2-)] [benzene-1,2-diolato(1)]-methyl[(2,2,6,6-tetramethylpiperidinio)methyl]silicate: isolation, structural characterization, and thermally induced methane elimination, *Organometallics* **21**, 3050-3053 (2002).
- 167) R. Tacke, V. I. Handmann, K. Kreutzmann, C. Keim, E. Mutschler, G. Lambrecht, 2-Methylimidazol-1-yl-substituted analogs of hexahydro-difenidol (HHD) and hexahydro-sila-difenidol (HHSiD) as M₃ receptor-preferring muscarinic antagonists: a study on C/Si bioisosterism, *Organometallics* **21**, 3727-3732 (2002).
- 168) O. Seiler, C. Burschka, M. Penka, R. Tacke, Dianionic tris[oxalato(2-)]silicate and tris[oxalato(2-)]germanate complexes: synthesis, properties, and structural characterization in the solid state and in solution, *Z. Anorg. Allg. Chem.* **628**, 2427-2434 (2002).
- 169) S. Dragota, R. Bertermann, C. Burschka, J. Heermann, M. Penka, I. Richter, B. Wagner, R. Tacke, Zwitterionic spirocyclic λ^5 Si-silicates with two *cis*-1,2-diphenylethene-1,2-diolato(2-) ligands: synthesis and structural characterization, *Silicon Chem.* **1**, 291-297 (2002).
- 170) O. Seiler, C. Burschka, M. Penka, R. Tacke, Dianionic complexes with hexacoordinate silicon(IV) or germanium(IV) and three bidentate ligands of the salicylato(2-) type: syntheses and structural characterization in the solid state and in solution, *Silicon Chem.*

- 1, 355-365 (2002).
- 171) R. Tacke, V. I. Handmann, R. Bertermann, C. Burschka, M. Penka, C. Seyfried, Sila-analogues of high-affinity, selective σ ligands of the spiro[indane-1,4'-piperidine] type: syntheses, structures, and pharmacological properties, *Organometallics* **22**, 916-924 (2003).
- 172) R. Tacke, T. Schmid, M. Hofmann, T. Tolasch, W. Francke, Sila-linalool as a pheromone analogue: a study on C/Si bioisosterism, *Organometallics* **22**, 370-372 (2003).
- 173) R. Bertermann, N. Kröger, R. Tacke, Solid-state ^{29}Si MAS NMR studies of diatoms: structural characterization of biosilica deposits, *Anal. Bioanal. Chem.* **375**, 630-634 (2003).
- 174) R. Tacke, R. Bertermann, A. Biller, C. Burschka, M. Penka, Chemistry of zwitterionic penta-coordinate silicon compounds of the (ammoniomethyl)bis[glycolato(2-)- O^1, O^2]silicate type in aqueous and nonaqueous solution, *Can. J. Chem.* **81**, 1315-1325 (2003).
- 175) S. Duda-Johner, J. O. Daiß, K. Mohr, R. Tacke, Synthesis and pharmacological characterization of new silicon-based W84-type allosteric modulators for ligand binding to muscarinic M_2 receptors, *J. Organomet. Chem.* **686**, 75-83 (2003).
- 176) O. Seiler, R. Bertermann, N. Buggisch, C. Burschka, M. Penka, D. Tebbe, R. Tacke, Hexacoordinate silicon(IV) complexes containing thiocyanato-*N* ligands – syntheses, structural characterization, and computational studies, *Z. Anorg. Allg. Chem.* **629**, 1403-1411 (2003).
- 177) R. Bertermann, A. Biller, M. Kaupp, M. Penka, O. Seiler, R. Tacke, New zwitterionic spirocyclic $\lambda^5\text{Si}$ -silicates with an SiX_4C skeleton ($\text{X} = \text{S}, \text{O}$) containing two ligands of the dithiolato(2-) or diolato(2-) type: synthesis, structure, and bonding situation, *Organometallics* **22**, 4104-4110 (2003).
- 178) T. Schmid, J. O. Daiss, R. Ilg, H. Surburg, R. Tacke, Enantiopure chiral derivatives of the fragrance materials majantol and sila-majantol: a bioisosteric carbon/silicon switch with drastic effects on the sensory characteristics, *Organometallics* **22**, 4343-4346 (2003).
- 179) R. Tacke, R. Bertermann, M. Penka, O. Seiler, Bis[acetylacetonato(1-)- O, O]-di(cyanato-*N*)silicon(IV): a neutral hexacoordinate silicon complex with two cyanato-*N* ligands, *Z. Anorg. Allg. Chem.* **629**, 2415-2420 (2003).
- 180) O. Seiler, M. Penka, R. Tacke, [Benzilato(2-)- O^1, O^2]bis[1,3-diphenylpropane-1,3-

- dionato(1-)-O,O]silicon(IV): a neutral heteroleptic hexacoordinate silicon(IV) complex with an SiO_6 skeleton, *Inorg. Chim. Acta* **357**, 1955-1958 (2004).
- 181) T. Heinrich, C. Burschka, J. Warneck, R. Tacke, Synthesis and pharmacological properties of silicon-containing 1,4-dihydropyridine derivatives: calcium channel antagonists and α_1 adrenoceptor antagonists of the sila-niguldipine type, *Organometallics* **23**, 361-366 (2004).
- 182) R. Tacke, T. Heinrich, R. Bertermann, C. Burschka, A. Hamacher, M. U. Kassack, Sila-haloperidol: a silicon analogue of the dopamine (D_2) receptor antagonist haloperidol, *Organometallics* **23**, 4468-4477 (2004).
- 183) R. Tacke, T. Schmid, M. Penka, C. Burschka, W. Bains, J. Warneck, Syntheses and pharmacological properties of the histaminic H_1 antagonists sila-terfenadine-A, sila-terfenadine-B, disila-terfenadine, and sila-fexofenadine: a study on C/Si bioisosterism, *Organometallics* **23**, 4915-4923 (2004).
- 184) J. O. Daiss, M. Penka, C. Burschka, R. Tacke, The *Si*-2,4,6-trimethoxyphenyl moiety as a novel protecting group in organosilicon chemistry: alternative synthesis of *rac*-sila-venlafaxine, *Organometallics* **23**, 4987-4994 (2004).
- 185) J. O. Daiss, K. A. Barth, C. Burschka, P. Hey, R. Ilg, K. Klemm, I. Richter, S. A. Wagner, R. Tacke, Synthesis of the multifunctional (chloromethyl)silanes $Cl_2Si(CH_2Cl)_2$, $(MeO)_2Si(CH_2Cl)_2$, $RSi(CH_2Cl)_3$ ($R = 2,4,6$ -trimethoxyphenyl), $ClSi(CH_2Cl)_3$, $MeOSi(CH_2Cl)_3$, $Si(CH_2Cl)_4$, and $ClCH_2CH_2Si(CH_2Cl)_3$, *Organometallics* **23**, 5193-5197 (2004).
- 186) J. O. Daiss, M. Albrecht, K. Mohr, R. Tacke, A novel silicon-based uncharged allosteric modulator for ligand binding to muscarinic M_2 receptors: synthesis and pharmacological characterization, *Organometallics* **23**, 6052-6057 (2004).
- 187) R. Tacke, R. Bertermann, C. Burschka, S. Dragota, M. Penka, I. Richter, Spirocyclic zwitterionic λ^5Si -silicates with two bidentate ligands derived from α -amino acids or α -hydroxycarboxylic acids: synthesis, structure, and stereodynamics, *J. Am. Chem. Soc.* **126**, 14493-14505 (2004).
- 188) R. Tacke, R. Bertermann, C. Burschka, S. Dragota, Hexacoordinate silicon(IV) complexes with SiO_6 skeletons and multidentate ligands derived from citric acid or malic acid, *Z. Anorg. Allg. Chem.* **630**, 2006-2012 (2004).
- 189) T. Heinrich, C. Burschka, M. Penka, B. Wagner, R. Tacke, 4-Silapiperidine and

- 4-silapiperidinium derivatives: syntheses and structural characterization, *J. Organomet. Chem.* **690**, 33-47 (2005).
- 190) J. O. Daiß, C. Burschka, R. Tacke, β -Carbonylsilanes with a silacyclohexane skeleton and additional C-functionalized organyl groups at the silicon atom: synthesis, reactivity, and NMR-spectroscopic characterization, *J. Organomet. Chem.* **690**, 678-684 (2005).
- 191) O. Seiler, C. Burschka, D. Schwahn, R. Tacke, Behavior of tri(*n*-butyl)ammonium bis[citrato(3-)- O^1, O^3, O^6]silicate in aqueous solution: analysis of a sol-gel process by small-angle neutron scattering, *Inorg. Chem.* **44**, 2318-2325 (2005).
- 192) R. Tacke, T. Schmid, M. Merget, The SiOH-containing α -amino acid $\text{HOMe}_2\text{SiCH}_2\text{-CH}(\text{NH}_2)\text{COOH}$ and its immobilization on silica via an Si-O-Si linkage, *Organometallics* **24**, 1780-1783 (2005).
- 193) O. Seiler, C. Burschka, M. Fischer, M. Penka, R. Tacke, Synthesis and structural characterization of novel neutral hexacoordinate silicon(IV) complexes with SiO_2N_4 skeletons containing cyanato-*N* or thiocyanato-*N* ligands, *Inorg. Chem.* **44**, 2337-2346 (2005).
- 194) J. O. Daiss, C. Burschka, J. S. Mills, J. G. Montana, G. A. Showell, I. Fleming, C. Gaudon, D. Ivanova, H. Gronemeyer, R. Tacke, Synthesis, crystal structure analysis, and pharmacological characterization of disila-bexarotene, a disila-analogue of the RXR-selective retinoid agonist bexarotene, *Organometallics* **24**, 3192-3199 (2005).
- 195) O. Seiler, C. Burschka, S. Metz, M. Penka, R. Tacke, Synthesis and structural characterization of neutral higher-coordinate silicon(IV) complexes with tridentate dianionic chelate ligands, *Chem. Eur. J.* **11**, 7379-7386 (2005).
- 196) R. Tacke, R. Bertermann, C. Burschka, S. Dragota, A zwitterionic spirocyclic pentacoordinate silicon compound synthesized in water by Si-O and Si-C bond cleavage, *Angew. Chem.* **117**, 5426-5429 (2005); *Angew. Chem. Int. Ed.* **44**, 5292-5295 (2005).
- 197) S. Dragota, R. Bertermann, C. Burschka, M. Penka, R. Tacke, Diastereo- and enantiomerically pure zwitterionic spirocyclic $\lambda^5\text{Si}$ -[(ammonio)methyl]silicates with an $\text{SiO}_2\text{N}_2\text{C}$ skeleton containing two bidentate chelate ligands derived from α -amino acids, *Organometallics* **24**, 5560-5568 (2005).
- 198) O. Seiler, M. Büttner, M. Penka, R. Tacke, Zwitterionic $\lambda^5\text{Si}$ -silicates with an SiS_4C or $\text{SiS}_2\text{O}_2\text{C}$ skeleton, compounds containing a square-pyramidal or trigonal-bipyramidal Si-coordination polyhedron, *Organometallics* **24**, 6059-6062 (2005).

- 199) R. Ilg, D. Troegel, C. Burschka, R. Tacke, Tetrafunctional silanes of the formula type $\text{Si}(\text{CH}_2\text{X})_4$ ($\text{X} = \text{SAc}, \text{SH}, \text{OAc}, \text{OH}, \text{Br}, \text{I}$), *Organometallics* **25**, 548-551 (2006).
- 200) J. O. Daiss, C. Burschka, J. S. Mills, J. G. Montana, G. A. Showell, J. B. H. Warneck, R. Tacke, Sila-venlafaxine, a sila-analogue of the serotonin/noradrenaline reuptake inhibitor venlafaxine: synthesis, crystal structure analysis, and pharmacological characterization, *Organometallics* **25**, 1188-1198 (2006).
- 201) G. A. Showell, M. J. Barnes, J. O. Daiss, J. S. Mills, J. G. Montana, R. Tacke, J. B. H. Warneck, (*R*)-Sila-venlafaxine: a selective noradrenaline reuptake inhibitor for the treatment of emesis, *Bioorg. Med. Chem. Lett.* **16**, 2555-2558 (2006).
- 202) X. Kästele, P. Klüfers, R. Tacke, Not unhydrolyzed at pH 8, *Angew. Chem.* **118**, 3286-3288 (2006); *Angew. Chem. Int. Ed.* **45**, 3212-3214 (2006).
- 203) J. O. Daiss, C. Burschka, J. S. Mills, J. G. Montana, G. A. Showell, J. B. H. Warneck, R. Tacke, Synthesis, crystal structure analysis, and pharmacological characterization of desmethoxy-sila-venlafaxine, a derivative of the serotonin/noradrenaline reuptake inhibitor sila-venlafaxine, *J. Organomet. Chem.* **691**, 3589-3595 (2006).
- 204) R. Ilg, C. Burschka, D. Schepmann, B. Wünsch, R. Tacke, Synthesis and pharmacological characterization of sila-panamesine, a sila-analogue of the σ receptor ligand panamesine (EMD 57445), *Organometallics* **25**, 5396-5408 (2006).
- 205) M. W. Büttner, M. Penka, L. Doszczak, P. Kraft, R. Tacke, Silicon analogues of the musk odorant versalide, *Organometallics* **26**, 1295-1298 (2007).
- 206) L. Doszczak, P. Fey, R. Tacke, Novel ligand-free, cobalt-catalyzed [2+2+2] cycloadditions: syntheses of 1,4-disilatetralines and 1,3-disilaindanes, *Synlett* **2007**, 753-756.
- 207) L. Doszczak, P. Kraft, H.-P. Weber, R. Bertermann, A. Triller, H. Hatt, R. Tacke, Duftvorhersage: das Computermodell des hOR17-4 Rezeptors auf dem Prüfstand mit Silicium-Analoga von Bourgeonal and lilial, *Angew. Chem.* **119**, 3431-3436 (2007); Prediction of perception: probing the hOR17-4 olfactory receptor model with silicon analogues of bourgeonal and lilial, *Angew. Chem. Int. Ed.* **46**, 3367-3371 (2007).
- 208) T. M. Klapötke, B. Krumm, R. Ilg, D. Troegel, R. Tacke, The sila-explosives $\text{Si}(\text{CH}_2\text{N}_3)_4$ and $\text{Si}(\text{CH}_2\text{ONO}_2)_4$: silicon analogues of the common explosives pentaerythryl tetraazide, $\text{C}(\text{CH}_2\text{N}_3)_4$, and pentaerythritol tetranitrate, $\text{C}(\text{CH}_2\text{ONO}_2)_4$, *J. Am. Chem. Soc.* **129**, 6908-6915 (2007).
- 209) O. Seiler, C. Burschka, T. Fenske, D. Troegel, R. Tacke, Neutral hexa- and pentacoordinate silicon(IV) complexes with SiO_6 and SiO_4N skeletons, *Inorg. Chem.* **46**,

- 5419-5424 (2007).
- 210) M. W. Büttner, S. Metz, P. Kraft, R. Tacke, Silicon-based noncyclic woody-ambery odorants: synthesis and olfactory characterization of 4,4,6,6-tetramethylheptan-2-one and its sila-analogues, *Organometallics* **26**, 3925-3929 (2007).
- 211) M. W. Büttner, C. Burschka, K. Junold, P. Kraft, R. Tacke, Disila-okoumal: a silicon analogue of the ambergris odorant okoumal, *ChemBioChem* **8**, 1447-1454 (2007).
- 212) M. W. Büttner, J. B. Nätscher, C. Burschka, R. Tacke, Development of a new building block for the synthesis of silicon-based drugs and odorants: alternative synthesis of the retinoid agonist disila-bexarotene, *Organometallics* **26**, 4835-4838 (2007).
- 213) D. Troegel, C. Burschka, S. Riedel, M. Kaupp, R. Tacke, Unusual silicon coordination polyhedra: non-VSEPR structures of zwitterionic λ^5 -Si silicon(IV) complexes with an $\text{SiS}_2\text{N}_2\text{C}$ or $\text{SiS}_2\text{O}_2\text{C}$ skeleton, *Angew. Chem.* **119**, 7131-7135 (2007); *Angew. Chem. Int. Ed.* **46**, 7001-7005 (2007).
- 214) S. Metz, C. Burschka, D. Platte, R. Tacke, Pentacoordination of silicon by five different ligand atoms: neutral silicon(IV) complexes with SiClSONC and SiISONC skeletons, *Angew. Chem.* **119**, 7136-7139 (2007); *Angew. Chem. Int. Ed.* **46**, 7006-7009 (2007).
- 215) M. W. Büttner, C. Burschka, J. O. Daiss, D. Ivanova, N. Rochel, S. Kammerer, C. Peluso-Iltis, A. Bindler, C. Gaudon, P. Germain, D. Moras, H. Gronemeyer, R. Tacke, Silicon analogues of the retinoid agonists TTNPB and 3-methyl-TTNPB, disila-TTNPB and disila-3-methyl-TTNPB: chemistry and biology, *ChemBioChem* **8**, 1688-1699 (2007).
- 216) O. Seiler, C. Burschka, K. Götz, M. Kaupp, S. Metz, R. Tacke, The new $\lambda^6\text{Si}$ -silicate dianion $[\text{Si}(\text{NCO})_6]^{2-}$: synthesis and structural characterization of $[\text{K}(18\text{-crown-6})]_2[\text{Si}(\text{NCO})_6]$, *Z. Anorg. Allg. Chem.* **633**, 2667-2670 (2007).
- 217) L. Doszczak, R. Tacke, Syntheses of 1,3-disilaindanes, 1,4-disilatetralines, and 1,3-disila-1,3-dihydroisobenzofuranes using cobalt-catalyzed [2+2+2] cycloadditions, *Organometallics* **26**, 5722-5723 (2007).
- 218) F. Popp, J. B. Nätscher, J. O. Daiss, C. Burschka, R. Tacke, The 2,4,6-trimethoxyphenyl unit as a unique protecting group for silicon in synthesis and the silylation potential of (2,4,6-trimethoxyphenyl)silanes, *Organometallics* **26**, 6014-6028 (2007).
- 219) R. Tacke, F. Popp, B. Müller, B. Theis, C. Burschka, A. Hamacher, M. U. Kassack, D. Schepmann, B. Wunsch, U. Jurva, E. Wellner, Sila-haloperidol, a silicon analogue of the dopamine (D_2) receptor antagonist haloperidol: synthesis, pharmacological

- properties, and metabolic fate, *ChemMedChem*. **3**, 152-164 (2008).
- 220) B. Theis, C. Burschka, R. Tacke, Optically active zwitterionic $\lambda^5\text{Si},\lambda^5\text{Si}'$ -disilicates: syntheses, crystal structures, and behavior in aqueous solution, *Chem. Eur. J.* **14**, 4618-4630 (2008).
- 221) G. González-García, J. A. Gutiérrez, S. Cota, S. Metz, R. Bertermann, C. Burschka, R. Tacke, Synthesis and structural characterization of novel neutral higher-coordinate silicon(IV) complexes with SiON_3C and SiON_4C skeletons, *Z. Anorg. Allg. Chem.* **634**, 1281-1286 (2008).
- 222) R. Haga, C. Burschka, R. Tacke, Syntheses, structures, and reactions of 2,2,3,3-tetrakis(trifluoromethanesulfonato)tetrasilanes: hexacoordination ([4 + 2] coordination) of the two central silicon atoms, *Organometallics* **27**, 4395-4400 (2008).
- 223) S. Metz, C. Burschka, R. Tacke, Synthesis and structural characterization of novel neutral hexacoordinate silicon(IV) complexes with $\text{SiS}_2\text{O}_2\text{N}_2$ skeletons, *Eur. J. Inorg. Chem.* **2008**, 4433-4439.
- 224) J. B. Warneck, F. H. M. Cheng, M. J. Barnes, J. S. Mills, J. G. Montana, R. J. Naylor, M.-P. Ngan, M.-K. Wai, J. O. Daiss, R. Tacke, J. A. Rudd, Action of (*R*)-silavenlafaxine and reboxetine to antagonize cisplatin-induced acute and delayed emesis in the ferret, *Toxicol. Appl. Pharmacol.* **232**, 369-375 (2008).
- 225) S. Metz, C. Burschka, R. Tacke, A neutral pentacoordinate silicon(IV) complex with a monodentate nitrate ligand: synthesis and structural characterization, *Organometallics* **27**, 6032-6034 (2008).
- 226) A. Jahnke, C. Burschka, R. Tacke, P. Kraft, Synthesis and olfactory evaluation of ($4aR^*,8aR^*$)-1,1,8a-trimethyldecahydronaphthalen-4a-ol: a *cis*-decalol intersection structure of (-)-patchoulol and ($5R^*,6S^*$)-1,1,6-trimethylspiro[4.5]decan-6-ol, *Synthesis*, 62-68 (2009).
- 227) S. Metz, C. Burschka, R. Tacke, Synthesis and structural characterization of neutral hexacoordinate silicon(IV) complexes with SiO_2N_4 skeletons, *Chem. Asian J.* **4**, 581-586 (2009).
- 228) S. Metz, C. Burschka, R. Tacke, Neutral hexacoordinate silicon(IV) complexes with an SiSO_3NC skeleton and a neutral pentacoordinate silicon(IV) complex containing a trianionic tetradentate *O,N,O,O* ligand, *Organometallics* **28**, 2311-2317 (2009).
- 229) D. Troegel, T. Walter, C. Burschka, R. Tacke, Synthesis and characterization of tris(mercaptomethyl)(2,4,6-trimethoxyphenyl)silane and its use for the immobilization of the $\text{Si}(\text{CH}_2\text{SH})_3$ group on silica via an Si–O–Si linkage, *Organometallics* **28**, 2756-

- 2761 (2009).
- 230) S. Falgner, D. Schmidt, R. Bertermann, C. Burschka, R. Tacke, Novel synthesis and crystal structure analysis of *rac*- β -(trimethylsilyl)alanine, *Organometallics* **28**, 2927-2930 (2009).
- 231) D. Troegel, F. Möller, C. Burschka, R. Tacke, 4-((2-Halogeno-5-pyridyl)dimethylsilyl)phenylboronic acids: new potential building blocks for the synthesis of silicon-containing drugs, *Organometallics* **28**, 3218-3224 (2009).
- 232) W. P. Lippert, C. Burschka, K. Götz, M. Kaupp, D. Ivanova, C. Gaudon, Y. Sato, P. Antony, N. Rochel, D. Moras, H. Gronemeyer, R. Tacke, Silicon analogues of the RXR-selective retinoid agonist SR11237 (BMS649): chemistry and biology, *ChemMedChem* **4**, 1143-1152 (2009).
- 233) B. Theis, S. Metz, C. Burschka, R. Bertermann, S. Maisch, R. Tacke, Neutral pentacoordinate silicon(IV) complexes with silicon–chalcogen (S, Se, Te) bonds, *Chem. Eur. J.* **15**, 7329-7338 (2009).
- 234) B. Theis, S. Metz, F. Back, C. Burschka, R. Tacke, Neutral pentacoordinate silicon(IV) complexes with SiClO_2NC , SiClON_2C , SiO_3NC , or $\text{SiO}_2\text{N}_2\text{C}$ skeletons, *Z. Anorg. Allg. Chem.* **635**, 1306-1312 (2009).
- 235) S. Metz, J. B. Nätscher, C. Burschka, K. Götz, M. Kaupp, P. Kraft, R. Tacke, Disilaphantolide and derivatives: synthesis and olfactory characterization of silicon-containing derivatives of the musk odorant phantolide, *Organometallics* **28**, 4700-4712 (2009).
- 236) D. Troegel, F. Möller, C. Burschka, R. Tacke, Synthesis and characterization of new trifunctional tetraorganosilanes of the formula types $\text{MeSi}(\text{CH}_2\text{X})_3$, $\text{MeSi}(\text{CH}_2\text{X})_2\text{CH}_2\text{X}'$, and $\text{MeSi}(\text{CH}_2\text{X})(\text{CH}_2\text{X}')\text{CH}_2\text{X}''$, *Organometallics* **28**, 5765-5770 (2009).
- 237) R. Tacke, V. Müller, M. W. Büttner, W. P. Lippert, R. Bertermann, J. O. Daiß, H. Khanwalkar, A. Furst, C. Gaudon, H. Gronemeyer, Synthesis and pharmacological characterization of disila-AM80 (disila-tamibarotene) and disila-AM580, silicon analogues of the RAR α -selective retinoid agonists AM80 (tamibarotene) and AM580, *ChemMedChem* **4**, 1797-1802 (2009).
- 238) S. Falgner, C. Burschka, S. Wagner, A. Böhm, J. O. Daiss, R. Tacke, Asymmetric synthesis of the nonproteinogenic silicon-containing α -amino acids (*R*)- and (*S*)- α -[(trimethylsilyl)methyl]alanine, *Organometallics* **28**, 6059-6066 (2009).
- 239) T. Weidner, N. Ballav, U. Siemeling, D. Troegel, T. Walter, R. Tacke, D. G. Castner,

- M. Zharnikov, Tripodal binding units for self-assembled monolayers on gold: a comparison of thiol and thioether headgroups, *J. Phys. Chem. C* **113**, 19609-19617 (2009).
- 240) T. Johansson, L. Weidolf, F. Popp, R. Tacke, U. Jurva, In vitro metabolism of haloperidol and sila-haloperidol: new metabolic pathways resulting from carbon/silicon exchange, *Drug Metab. Dispos.* **38**, 73-83 (2010).
- 241) D. Troegel, F. Möller, R. Tacke, (2-Halogeno-5-pyridyl)dimethyl(oxiran-2-ylmethyl)silanes: new potential building blocks for the synthesis of silicon-containing drugs, *J. Organomet. Chem.* **695**, 310-313 (2010).
- 242) J. B. Nätscher, N. Laskowski, P. Kraft, R. Tacke, Lower homologues of okoumal and disila-okoumal: synthesis and olfactory characterization of novel ambergris odorants, *ChemBioChem* **11**, 315-319 (2010).
- 243) R. Tacke, B. Nguyen, C. Burschka, W. P. Lippert, A. Hamacher, C. Urban, M. U. Kassack, Sila-trifluperidol, a silicon analogue of the dopamine (D₂) receptor antagonist trifluperidol: synthesis and pharmacological characterization, *Organometallics* **29**, 1652-1660 (2010).
- 244) C. Evangelisti, T. M. Klapötke, B. Krumm, A. Nieder, R. J. F. Berger, S. A. Hayes, N. W. Mitzel, D. Troegel, R. Tacke, Sila-substitution of alkyl nitrates: synthesis, structural characterization, and sensitivity studies of highly explosive (nitratomethyl)-, bis(nitratomethyl)-, and tris(nitratomethyl)silanes and their corresponding carbon analogues, *Inorg. Chem.* **49**, 4865-4880 (2010).
- 245) D. Troegel, W. P. Lippert, F. Möller, C. Burschka, R. Tacke, New C-functionalized silacycloalkanes (CH₂)_nSi(CH₂X)₂ and (CH₂)_nSi(CH₂X)CH₂X' (n = 3, 4; X, X' = functional group): synthesis and reactivity studies of analogous silacyclobutanes and silacyclopentanes, *J. Organomet. Chem.* **695**, 1700-1707 (2010).
- 246) S. Cota, M. Beyer, R. Bertermann, C. Burschka, K. Götz, M. Kaupp, R. Tacke, Neutral penta- and hexacoordinate silicon(IV) complexes containing two bidentate ligands derived from the α-amino acids (S)-alanine, (S)-phenylalanine, and (S)-tert-leucine, *Chem. Eur. J.* **16**, 6582-6589 (2010).
- 247) S. Metz, B. Theis, C. Burschka, R. Tacke, Neutral pentacoordinate halogeno- and pseudohalogenosilicon(IV) complexes with an SiSONCX skeleton (X = F, Cl, Br, I, N, C): synthesis and structural characterization in the solid state and in solution, *Chem. Eur. J.* **16**, 6844-6856 (2010).
- 248) A. Sunderkötter, S. Lorenzen, R. Tacke, P. Kraft, Novel silicon-based patchouli odorants

- of the trialkyl(1-hydroxy-1-methylethyl)silane type: design, synthesis, and olfactory properties, *Chem. Eur. J.* **16**, 7404-7421 (2010).
- 249) R. Mizojiri, R. Conroy, J. Daiss, E. Kotani, R. Tacke, D. Miller, L. Walsh, T. Kawamoto, Large-scale synthesis of 1,1,3,3,6-pentamethyl-1,3-disilaindan-5-ol via a CoBr₂/Zn-catalyzed [2+2+2] cycloaddition reaction, *Tetrahedron* **66**, 7738-7742 (2010).
- 250) K. Junold, C. Burschka, R. Bertermann, R. Tacke, Novel neutral hexacoordinate silicon(IV) complexes with two bidentate monoanionic benzamidinato ligands, *Dalton Trans.* **39**, 9401-9413 (2010).
- 251) S. Falgner, G. Buchner, R. Tacke, Synthesis of *rac*-2'-(trimethylsilyl)isovaline: a novel silicon-containing α,α -dialkylated α -amino acid, *J. Organomet. Chem.* **695**, 2614-2617 (2010).
- 252) U.-P. Apfel, D. Troegel, Y. Halpin, S. Tschierlei, U. Uhlemann, H. Görls, M. Schmitt, J. Popp, P. Dunne, M. Venkatesan, M. Coey, M. Rudolph, J. G. Vos, R. Tacke, W. Weigand, Models for the active site in [FeFe] hydrogenase with iron-bound ligands derived from bis-, tris-, and tetrakis(mercaptomethyl)silanes, *Inorg. Chem.* **49**, 10117-10132 (2010).
- 253) A. Berkefeld, D. Troegel, C. Burschka, R. Tacke, Synthesis and characterization of {[tris(trimethylsilyl)silyl]methyl}silanes of the formula type Me_{4-n}Si[CH₂Si(SiMe₃)₃]_n ($n = 1-3$) and derivatives, *Organometallics* **29**, 4548-4554 (2010).
- 254) J. B. G. Gluyas, C. Burschka, P. Kraft, R. Tacke, 5,6-Disubstituted 1,2,3-trisilaindanes as silicon analogues of phantolide-type musk odorants: synthesis, structure, reactivity, and olfactory properties, *Organometallics* **29**, 5897-5903 (2010).
- 255) M. Geyer, J. Bauer, C. Burschka, P. Kraft, R. Tacke, Synthesis and olfactory characterization of novel silicon-containing acyclic dienone musk odorants, *Eur. J. Inorg. Chem.* **2011**, 2769-2776.
- 256) J. B. Bauer, W. P. Lippert, S. Dörrich, D. Tebbe, C. Burschka, V. B. Christie, D. M. Tams, A. P. Henderson, B. A. Murray, T. B. Marder, S. A. Przyborski, R. Tacke, Novel silicon-containing analogues of the retinoid agonist bexarotene: syntheses and biological effects on human pluripotent stem cells, *ChemMedChem* **6**, 1509-1517 (2011).
- 257) K. Junold, C. Burschka, R. Bertermann, R. Tacke, Novel neutral hexacoordinate benzamidinosilicon(IV) complexes with SiN₃OF₂, SiN₃OCl₂, SiN₃OBr₂, SiN₅O and SiN₃O₃ skeletons, *Dalton Trans.* **40**, 9844-9857 (2011).
- 258) M. J. Barnes, C. Burschka, M. W. Büttner, R. Conroy, J. O. Daiss, I. C. Gray, A. G. Hendrick, L. H. Tam, D. Kuehn, D. J. Miller, J. S. Mills, P. Mitchell,

- J. G. Montana, P. A. Muniandy, H. Rapley, G. A. Showell, D. Tebbe, R. Tacke, J. B. H. Warneck, B. Zhu, Silicon analogues of the nonpeptidic GnRH antagonist AG-045572: syntheses, crystal structure analyses, and pharmacological characterization, *ChemMedChem* **6**, 2070-2080 (2011).
- 259) K. Junold, C. Burschka, R. Tacke, Activation of nitriles by trichloro[2-(dialkylphosphanyl)imidazol-1-yl]silanes – synthesis and characterization of new dinuclear penta-coordinate silicon(IV) complexes with bridging imido-nitrogen ligand atoms, *Eur. J. Inorg. Chem.* **2012**, 189-193.
- 260) R. Tacke, R. Bertermann, C. Burschka, S. Dörrich, M. Fischer, B. Müller, G. Meyerhans, D. Schepmann, B. Wünsch, I. Arnason, R. Bjornsson, High-affinity, selective σ ligands of the 1,2,3,4-tetrahydro-1,4-silaspiro[naphthalene-1,4-piperidine] type: syntheses, structures, and pharmacological properties, *ChemMedChem* **7**, 523-532 (2012).
- 261) C. Kobelt, C. Burschka, R. Bertermann, C. Fonseca Guerra, F. M. Bickelhaupt, R. Tacke, Synthesis and structural characterisation of neutral pentacoordinate silicon(IV) complexes with a tridentate dianionic *N,N,S* chelate ligand, *Dalton Trans.* **41**, 2148-2162 (2012).
- 262) B. Theis, J. Weiß, W. P. Lippert, R. Bertermann, C. Burschka, R. Tacke, Zwitterionic and anionic multinuclear silicon(IV) complexes with bridging (*R,R*)-tartrato(4⁻) ligands and SiO₅ skeletons: synthesis and reactivity in aqueous solution, *Chem. Eur. J.* **18**, 2202-2206 (2012).
- 263) J. Weiß, B. Theis, S. Metz, C. Burschka, C. Fonseca Guerra, F. M. Bickelhaupt, R. Tacke, Neutral pentacoordinate halogeno- and pseudohalogenosilicon(IV) complexes with a tridentate dianionic *O,N,O* or *N,N,O* ligand: synthesis and structural characterization in the solid state and in solution, *Eur. J. Inorg. Chem.* **2012**, 3216-3228.
- 264) T. M. Klapötke, B. Krumm, A. Nieder, O. Richter, D. Troegel, R. Tacke, Silicon-containing explosives: syntheses and sensitivity studies of (azidomethyl)-, bis(azidomethyl)-, and tris(azidomethyl)silanes, *Z. Anorg. Allg. Chem.* **638**, 1075-1079 (2012).
- 265) K. Junold, J. A. Baus, C. Burschka, R. Tacke, Bis[*N,N'*-diisopropylbenzamido(-)]-silicon(II): a silicon(II) compound with both a bidentate and a monodentate amidinato ligand, *Angew. Chem.* **124**, 7126-7129 (2012); *Angew. Chem. Int. Ed.* **51**, 7020-7023 (2012).

- 266) S. Dörrich, S. Falgner, S. Schweeberg, C. Burschka, P. Brodin, B. M. Wissing, B. Basta, P. Schell, U. Bauer, R. Tacke, Silicon-containing dipeptidic aspartame and neotame analogues, *Organometallics* **31**, 5903-5917 (2012).
- 267) J. B. G. Gluyas, C. Burschka, S. Dörrich, J. Vallet, H. Gronemeyer, R. Tacke, Disila-analogues of the synthetic retinoids EC23 and TTNN: synthesis, structure and biological evaluation, *Org. Biomol. Chem.* **10**, 6914-6929 (2012).
- 268) K. Junold, J. A. Baus, C. Burschka, D. Auerhammer, R. Tacke, Stable five-coordinate silicon(IV) complexes with SiN₄X skeletons (X = S, Se, Te) and Si=X double bonds, *Chem. Eur. J.* **18**, 16288-16291 (2012).
- 269) P. Luger, M. Weber, C. Hübschle, R. Tacke, Electron densities of bexarotene and disila-bexarotene from invariom application: a comparative study, *Org. Biomol. Chem.* **11**, 2348-2354 (2013).
- 270) N. Laskowski, E.-M. Reis, L. Kötzner, J. A. Baus, C. Burschka, R. Tacke, Synthesis of silicon-functionalized (silylmethyl)silanes and α,ω -dichlorocarbosilanes using the TMOP (2,4,6-trimethoxyphenyl) protecting group: (TMOP)Me₂SiCH₂Cl and (TMOP)₂MeSiCH₂Cl as reagents to introduce the ClMe₂SiCH₂, MeOMe₂SiCH₂, or Cl₂MeSiCH₂ group by nucleophilic substitution at silicon, *Organometallics* **32**, 3269-3278 (2013).
- 271) S. Dörrich, J. B. Bauer, S. Lorenzen, C. Mahler, S. Schweeberg, C. Burschka, J. A. Baus, R. Tacke, P. Kraft, Disila-galaxolide and derivatives: synthesis and olfactory characterization of silicon-containing derivatives of the musk odorant galaxolide, *Chem. Eur. J.* **19**, 11396-11408 (2013).
- 272) J. A. Baus, C. Burschka, R. Bertermann, C. Fonseca Guerra, F. M. Bickelhaupt, R. Tacke, Neutral six-coordinate and cationic five-coordinate silicon(IV) complexes with two bidentate monoanionic *N,S*-pyridine-2-thiolato(−) ligands, *Inorg. Chem.* **52**, 10664-10676 (2013).
- 273) K. Junold, J. A. Baus, C. Burschka, T. Vent-Schmidt, S. Riedel, R. Tacke, Five-coordinate silicon(II) compounds with Si–M bonds (M = Cr, Mo, W, Fe): bis[*N,N'*-diisopropylbenzamidinato(−)]silicon(II) as a ligand in transition-metal complexes, *Inorg. Chem.* **52**, 11593-11599 (2013).
- 274) F. M. Mück, K. Junold, J. A. Baus, C. Burschka, R. Tacke, Donor-stabilized silylenes with guanidinato ligands, *Eur. J. Inorg. Chem.* **2013**, 5821-5825.
- 275) M. Fischer, R. Tacke, Synthesis of 4-silapiperidine building blocks with N–H groups using the Staudinger reaction, *Organometallics* **32**, 7181-7185 (2013).

- 276) J. Weiß, K. Sinner, J. A. Baus, C. Burschka, R. Tacke, Neutral hexacoordinate silicon(IV) complexes with a SiO_4NC or SiO_3N_2C skeleton and neutral pentacoordinate silicon(IV) complexes containing a trianionic tetradentate O,N,O,O ligand, *Eur. J. Inorg. Chem.* **2014**, 475-483.
- 277) B. Förster, R. Bertermann, P. Kraft, R. Tacke, Sila-rhubafuran and derivatives: synthesis and olfactory characterization of novel silicon-containing odorants, *Organometallics* **33**, 338-346 (2014).
- 278) J. Weiß, B. Theis, J. A. Baus, C. Burschka, R. Bertermann, R. Tacke, Neutral pentacoordinate silicon(IV) complexes with a tridentate dianionic O,N,O or N,N,O ligand, an anionic PhX ligand ($X = O, S, Se$), and a phenyl group: synthesis and structural characterization in the solid state and in solution, *Z. Allg. Anorg. Chem.* **640**, 300-309 (2014).
- 279) J. Friedrich, S. Dörrich, A. Berkefeld, P. Kraft, R. Tacke, Synthesis and olfactory characterization of sila-methyl pamplemousse and related odorants with a 2,2,5-trimethyl-2-silahex-4-ene skeleton, *Organometallics* **33**, 796-803 (2014).
- 280) M. Fischer, C. Burschka, R. Tacke, Synthesis of 4-silacyclohexan-1-ones and (4-silacyclohexan-1-yl)amines containing the silicon protecting groups MOP (4-methoxyphenyl), DMOP (2,4-dimethoxyphenyl), or TMOP (2,4,6-trimethoxyphenyl): versatile Si- and C-functional building blocks for synthesis, *Organometallics* **33**, 1020-1029 (2014).
- 281) J. Weiß, J. A. Baus, C. Burschka, R. Tacke, Neutral hexacoordinate silicon(IV) complexes with a tridentate dianionic O,N,X ligand ($X = O, N, S$), bidentate monoanionic X,N ligand ($X = O, S$), and phenyl ligand: compounds with a SiO_3N_2C , $SiSO_2N_2C$, SiO_2N_3C , $SiSON_3C$, or SiS_2ON_2C skeleton, *Eur. J. Inorg. Chem.* **2014**, 2449-2455.
- 282) K. Junold, M. Nutz, J. A. Baus, C. Burschka, C. Fonseca Guerra, F. M. Bickelhaupt, R. Tacke, The donor-stabilized silylene bis[N,N' -diisopropylbenzamidinato(-)]-silicon(II): synthesis, electronic structure, and reactivity, *Chem. Eur. J.* **20**, 9319-9329 (2014).
- 283) A. Berkefeld, C. Fonseca Guerra, R. Bertermann, D. Troegel, J. O. Daiß, J. O. Stohrer, F. M. Bickelhaupt, R. Tacke, Silicon α -effect: a systematic experimental and computational study of the hydrolysis of C_α - and C_γ -functionalized alkoxytriorganylsilanes of the formula type $ROSiMe_2(CH_2)_nX$ ($R = Me, Et; n = 1, 3; X =$ functional group), *Organometallics* **33**, 2721-2737 (2014).
- 284) F. M. Mück, D. Kloß, J. A. Baus, C. Burschka, R. Tacke, Novel transition-metal ($M =$

- Cr, Mo, W, Fe) carbonyl complexes with bis(guanidinato)silicon(II) ligands, *Chem. Eur. J.* **20**, 9620-9626 (2014).
- 285) K. Junold, J. A. Baus, C. Burschka, C. Fonseca Guerra, F. M. Bickelhaupt, R. Tacke, Bis[*N,N'*-diisopropylbenzamidinato(-)]silicon(II): Lewis acid/base reactions with triorganylboranes, *Chem. Eur. J.* **20**, 12411-12415 (2014).
- 286) S. Dörrich, A. Ulmer, C. Mahler, C. Burschka, J. A. Baus, R. Tacke, A. Chai, C. Ding, Y. Zou, G. Brunner, A. Goeke, P. Kraft, Sila- α -galbanone and analogues: synthesis and olfactory characterization of silicon-containing derivatives of the galbanum odorant α -galbanone, *Eur. J. Inorg. Chem.* **2014**, 4394-4407.
- 287) K. Junold, F. M. Mück, C. Kupper, J. A. Baus, C. Burschka, R. Tacke, Activation of sulfur dioxide by bis[*N,N'*-diisopropylbenzamidinato(-)]silicon(II): synthesis of neutral six-coordinate silicon(IV) complexes with chelating *O,O'*-sulfito or *O,O'*-dithionito ligands, *Chem. Eur. J.* **20**, 12781-12785 (2014).
- 288) K. Junold, J. A. Baus, C. Burschka, M. Finze, R. Tacke, Selective C–H bond activation of 1,2-dicarb-*closo*-dodecaborane by the donor-stabilized silylene bis[*N,N'*-diisopropylbenzamidinato(-)]silicon(II), *Eur. J. Inorg. Chem.* **2014**, 5099-5102.
- 289) N. Laskowski, K. Junold, C. Kupper, J. A. Baus, C. Burschka, R. Tacke, Bis[*N,N'*-diisopropylbenzamidinato(-)]silicon(II): cycloaddition reactions with organic 1,3-dienes and 1,2-diketones, *Organometallics* **33**, 6141-6148 (2014).
- 290) S. Dörrich, C. Mahler, R. Tacke, P. Kraft, Synthesis and olfactory characterization of silicon-containing derivatives of the acyclic lily-of-the-valley odorant 5,7,7-trimethyl-4-methylideneoctanal, *Chem. Biodiversity* **11**, 1675-1687 (2014).
- 291) S. Dörrich, L. Gelis, S. Wolf, A. Sunderkötter, C. Mahler, E. Guschina, R. Tacke, H. Hatt, P. Kraft, Comparative analysis of the olfactory properties of silicon/germanium/tin analogues of the lily-of-the-valley odorants lilial and bourgeonal, *ChemPlusChem* **79**, 1747-1752 (2014).
- 292) K. Junold, K. Sinner, J. A. Baus, C. Burschka, C. Fonseca Guerra, F. M. Bickelhaupt, R. Tacke, Reactions of the donor-stabilized silylene bis[*N,N'*-diisopropylbenzamidinato(-)]silicon(II) with Brønsted acids, *Chem. Eur. J.* **20**, 16462-16466 (2014).
- 293) F. M. Mück, A. Ulmer, J. A. Baus, C. Burschka, R. Tacke, Thermally stable four-coordinate silicon(IV) complexes with an Si=N double bond and an SiN₃X skeleton (X = O, S, Se, Te), *Eur. J. Inorg. Chem.* **2015**, 1860-1864.
- 294) M. Geyer, E. Wellner, U. Jurva, S. Saloman, D. Armstrong, R. Tacke, Can silicon make

- an excellent drug even better? An in vitro and in vivo head-to-head comparison between loperamide and its silicon analogue sila-loperamide, *ChemMedChem* **10**, 911-924 (2015).
- 295) M. Geyer, O. Karlsson, J. A. Baus, E. Wellner, R. Tacke, Si- and C-functional organosilicon building blocks for synthesis based on 4-silacyclohexan-1-ones containing the silicon protecting groups MOP (4-methoxyphenyl), DMOP (2,6-dimethoxyphenyl), or TMOP (2,4,6-trimethoxyphenyl), *J. Org. Chem.* **80**, 5804-5811 (2015).
- 296) P. Luger, B. Dittrich, R. Tacke, Invariom based electron density studies on the C/Si analogues haloperidol/sila-haloperidol and venlafaxine/sila-venlafaxine, *Org. Biomol. Chem.* **13**, 9093-9106 (2015).
- 297) R. Tacke, C. Kobelt, J. A. Baus, R. Bertermann, C. Burschka, Synthesis, structure and reactivity of a donor-stabilised silylene with a bulky bidentate benzamidinato ligand, *Dalton Trans.* **44**, 14959-14974 (2015).
- 298) F. M. Mück, D. Kloß, J. A. Baus, C. Burschka, R. Bertermann, J. Poater, C. Fonseca Guerra, F. M. Bickelhaupt, R. Tacke, Stable four-coordinate guanidinosilicon(IV) complexes with SiN₃El skeletons (El = S, Se, Te) and Si=El double bonds, *Chem. Eur. J.* **21**, 14011-14021 (2015).
- 299) K. Samedov, R. West, P. W. Percival, J.-C. Brodovitch, L. Chandrasena, M. Mozafari, R. Tacke, K. Junold, C. Kobelt, P. O. Samuel, R. Azakhar, K. C. Mondal, H. W. Roesky, M. Driess, W. Wang, Free radicals of N-donor-stabilized silicon(II) compounds probed by Muon spin spectroscopy, *Organometallics* **34**, 3532-3537 (2015).
- 300) F. M. Mück, J. A. Baus, M. Nutz, C. Burschka, J. Poater, F. M. Bickelhaupt, R. Tacke, Reactivity of the donor-stabilized silylenes [iPrNC(Ph)NiPr]₂Si and [iPrNC(NiPr₂)NiPr]₂Si: activation of CO₂ and CS₂, *Chem. Eur. J.* **21**, 16665-16672 (2015).
- 301) M. Geyer, J. A. Baus, O. Fjellström, E. Wellner, L. Gustafsson, R. Tacke, Synthesis and pharmacological properties of silicon-containing GPR81 and GPR109A agonists, *ChemMedChem* **10**, 2063-2070 (2015).
- 302) J. Ehbets, S. Lorenzen, C. Mahler, R. Bertermann, A. Berkefeld, J. Poater, E. Fritz-Langhals, R. Weidner, F. M. Bickelhaupt, R. Tacke, Synthesis and hydrolysis of alkoxy(aminoalkyl)diorganosilanes of the formula type R₂(RO)Si(CH₂)_nNH₂ (R = alkyl, n = 1–3): a systematic experimental and computational study, *Eur. J. Inorg. Chem.* **2016**, 1641-1659.
- 303) F. M. Mück, J. A. Baus, A. Ulmer, C. Burschka, R. Tacke, Reactivity of the donor-stabilized guanidinosilylene [ArNC(NMe₂)NAr]Si[N(SiMe₃)₂] (Ar = 2,6-diiso-

- propylphenyl), *Eur. J. Inorg. Chem.* **2016**, 1660-1670.
- 304) F. M. Mück, J. A. Baus, C. Burschka, R. Tacke, Cationic five-coordinate bis(guanidinato)silicon(IV) complexes with SiN₄El skeletons (El = S, Se): “heterolytic activation“ of S–S and Se–Se bonds, *Chem. Eur. J.* **22**, 5830-5834 (2016).
- 305) F. M. Mück, J. A. Baus, R. Bertermann, R. Tacke, SO₂ activation by the bis(guanidinato)silylene [iPrNC(NiPr₂)NiPr]₂Si: formation of neutral six-coordinate silicon(IV) complexes with a chelating sulfito or dithionito ligand, *Eur. J. Inorg. Chem.* **2016**, 3240-3245.
- 306) F. M. Mück, B. Förster, J. A. Baus, M. Nutz, C. Burschka, R. Bertermann, R. Tacke, Four-, five-, and six-coordinate silicon(IV) complexes: reactivity of the donor-stabilized silylenes [iPrNC(Ph)NiPr]₂Si and [iPrNC(NiPr₂)NiPr]₂Si towards Me₃SiN₃ and PhSCH₂N₃, *Eur. J. Inorg. Chem.* **2016**, 3246-3252.
- 307) F. M. Mück, J. A. Baus, R. Bertermann, C. Burschka, R. Tacke, Lewis acid/base reactions of the bis(amidinato)silylene [iPrNC(Ph)NiPr]₂Si and bis(guanidinato)silylene [iPrNC(NiPr₂)NiPr]₂Si with ElPh₃ (El = B, Al), *Organometallics* **35**, 2583-2588 (2016).
- 308) J. A. Baus, F. M. Mück, R. Bertermann, R. Tacke, Homoleptic two-coordinate 14-electron palladium and platinum complexes with two bis(guanidinato)silylene ligands, *Eur. J. Inorg. Chem.* **2016**, 4867-4871.
- 309) J. A. Baus, N. Laskowski, R. Tacke, A silacyclopropene with a six-coordinate silicon atom and an SiN₄C₂ skeleton: synthesis and structural characterization, *Eur. J. Inorg. Chem.* **2016**, 5182-5184.
- 310) J. A. Baus, J. Poater, F. M. Bickelhaupt, R. Tacke, Silylene-induced reduction of [Mn₂(CO)₁₀]: formation of a five-coordinate silicon(IV) complex with an O-bound [(OC)₄Mn=Mn(CO)₄]²⁻ ligand, *Eur. J. Inorg. Chem.* **2017**, 186-191.
- 311) J. A. Baus, F. M. Mück, H. Schneider, R. Tacke, Iron(II), cobalt(II), and zinc(II) silylene complexes: reaction of the silylene [iPrNC(NiPr₂)NiPr]₂Si with FeBr₂, CoBr₂, NiBe₂ • MeOCH₂CH₂OMe, ZnCl₂, and ZnBr₂, *Chem. Eur. J.* **23**, 296-303 (2017).
- 312) J. A. Baus, R. Tacke, Neutral six-coordinate bis(dithiocarbamato)silicon(IV) complexes with an SiCl₂S₄ skeleton, *Dalton Trans.* **46**, 8751-8755 (2017).
- 313) J. Seufert, E. Welz, I. Krummenacher, V. Paprocki, J. Böhnke, S. Hagspiel, R. D. Dewhurst, R. Tacke, B. Engels, H. Braunschweig, Isolation and characterization of crystalline, neutral diborane(4) radicals, *Angew. Chem.* **2018**, 10912-10915; *Angew. Chem. Int. Ed.* **2018**, 10752-10755.

B) Reviews/Proceedings

- 1) R. Tacke, U. Wannagat, Syntheses and properties of bioactive organo-silicon compounds, *Top. Curr. Chem.* **84**, 1-75 (1979).
- 2) R. Tacke, Bioaktive Siliciumverbindungen, *Chemie in unserer Zeit* **14**, 197-207 (1980).
- 3) R. Tacke, Sila-Pharmaka: Kohlenstoff wird durch Silicium ersetzt, *Umschau* **82**, 770 (1982).
- 4) R. Tacke, Recent results in bioorganosilicon chemistry: novel sila-drugs and microbial transformations of organosilicon compounds, in: *Organosilicon and Bioorganosilicon Chemistry: Structure, Bonding, Reactivity and Synthetic Application* (Ed.: H. Sakurai), pp. 251-262, Ellis Horwood Ltd., Chichester 1985.
- 5) R. Tacke, H. Zilch, Drug-design by sila-substitution and microbial transformations of organosilicon compounds: some recent results, *L'Actualité Chimique* **1986** (3), 75-82; reprint in: *Silicon Compounds: Register and Review* (Eds.: R. Anderson, B. Arkles, G. L. Larson), pp. 47-53, Petrarch Systems, Bristol PA 1987.
- 6) R. Tacke, H. Zilch, Sila-substitution – a useful strategy for drug design ?, *Endeavour, New Series* **10**, 191-197 (1986).
- 7) R. Tacke, B. Becker, Sila-substitution of drugs and biotransformation of organosilicon compounds, *Main Group Met. Chem.* **10**, 169-197 (1987).
- 8) G. Lambrecht, E. Mutschler, U. Moser, J. Riotte, M. Wagner, J. Wess, G. Gmelin, R. Tacke, H. Zilch, Heterogeneity in muscarinic receptors: evidence from pharmacological and electrophysiological studies with selective antagonists, in: *International Symposium on Muscarinic Cholinergic Mechanisms* (Eds.: S. Cohen, M. Sokolovsky), pp. 245-253, Freund Publishing House Ltd., London 1987.
- 9) C. Syldatk, A. Stoffregen, A. Brans, K. Fritsche, H. Andree, F. Wagner, H. Hengelsberg, A. Tafel, F. Wuttke, H. Zilch, R. Tacke, Biotransformation as a new method for preparing optically active organometallic compounds, in: *Enzyme Engineering 9, Ann. N.Y. Acad. Sci.*, Vol. 542 (Eds.: H. W. Blanch, A. M. Klibanov), pp. 330-338, The New York Academy of Sciences, New York 1988.
- 10) R. Tacke, H. Linoh, Bioorganosilicon chemistry, in: *The Chemistry of Organic Silicon Compounds*, Part 2 (Eds.: S. Patai, Z. Rappoport), pp. 1143-1206, John Wiley & Sons Ltd., Chichester 1989.
- 11) C. Syldatk, J. Fooladi, A. Stoffregen, M. Wettern, H. Hengelsberg, R. Tacke, Bioconversion of organosilicon compounds by immobilized algae: reductions of

- acetylsilanes, in: *Proceedings of the Braunschweig Symposium on Applied Plant Molecular Biology* (Ed.: G. Gallig), pp. 474-479, Zentralstelle fuer Weiterbildung der Technische Universität Braunschweig, Braunschweig 1989.
- 12) G. Lambrecht, J. Wess, R. Tacke, E. Mutschler, Heterogeneity of muscarinic receptors: evidence from structure-activity relationships of antimuscarinic agents related to pridinol and sila-pridinol, in: *Trends in Medicinal Chemistry '88* (Eds.: H. van der Goot, G. Domány, L. Pallos, H. Timmerman), pp. 265-282, Elsevier Science Publishers B.V., Amsterdam 1989.
 - 13) G. Lambrecht, R. Feifel, U. Moser, M. Wagner-Röder, L. K. Choo, J. Camus, M. Tastenoy, M. Waelbroeck, C. Strohmann, R. Tacke, J. F. Rodrigues de Miranda, J. Christophe, E. Mutschler, Pharmacology of hexahydro-difenidol, hexahydro-sila-difenidol and related selective muscarinic antagonists, *Trends Pharmacol. Sci.* **10**, Suppl. 60-64 (1989).
 - 14) M. Waelbroeck, M. Tastenoy, J. Camus, R. Feifel, E. Mutschler, C. Strohmann, R. Tacke, G. Lambrecht, J. Christophe, Stereoselectivity of the interaction of muscarinic antagonists with their receptors, *Trends Pharmacol. Sci.* **10**, Suppl. 65-69 (1989).
 - 15) E. Mutschler, G. Lambrecht, U. Moser, R. Tacke, J. Wess, Subclassification of muscarinic receptors, in: *Topics in Pharmaceutical Sciences 1989, Proceedings of the 49th International Congress of Pharmaceutical Sciences of F.I.P.* (Eds.: D. D. Breimer, D. J. A. Crommelin, K. K. Midha), pp. 97-111, Fédération Internationale Pharmaceutique (F.I.P.), The Hague 1989.
 - 16) K. Fritsche, H. Hengelsberg, C. Sylatk, R. Tacke, F. Wagner, Enzymatic preparation of optically active organosilicon compounds, in: *DECHEMA Biotechnology Conferences*, Vol. 3, Part A (Eds.: D. Behrens, A. J. Driesel), pp. 149-152, VCH Verlagsgesellschaft, Weinheim 1989.
 - 17) C. Sylatk, J. Fooladi, A. Stoffregen, R. Tacke, F. Wagner, M. Wettern, Screening for matrices for viable cells, in: *Physiology of Immobilized Cells* (Eds.: J. A. M. de Bont, J. Visser, B. Mattiasson, J. Tramper), pp. 377-385, Elsevier Science Publishers B.V., Amsterdam 1990.
 - 18) R. Tacke, Silicium-Chemie im Spannungsfeld der Biowissenschaften, in: *40 Jahre Fonds der Chemischen Industrie 1950-1990* (Ed.: Verband der Chemischen Industrie e.V. – Fonds der Chemischen Industrie), pp. 51-62, Frankfurt 1990.
 - 19) R. Tacke, S. Brakmann, M. Kropfgans, C. Strohmann, F. Wuttke, G. Lambrecht, E. Mutschler, P. Proksch, H.-M. Schiebel, L. Witte, Bioorganosilicon chemistry – recent

- results, in: *Frontiers of Organosilicon Chemistry* (Eds.: A. R. Bassindale, P. P. Gaspar), pp. 218-228, The Royal Society of Chemistry, Cambridge 1991.
- 20) R. Tacke, J. Becht, A. Lopez-Mras, J. Sperlich, Molecular λ^5 -silicates: synthesis, structure and properties of zwitterionic λ^5 -organospirosilicates and λ^5 -organofluorosilicates, *J. Organomet. Chem.* **446**, 1-8 (1993).
- 21) R. Tacke, J. Becht, O. Dannappel, M. Kropfgans, A. Lopez-Mras, M. Mühleisen, J. Sperlich, Zwitterionic λ^5 -organospirosilicates and λ^5 -organofluorosilicates: syntheses, structures, and properties, in: *Progress in Organosilicon Chemistry* (Eds.: B. Marciniak, J. Chojnowski), pp. 55-68, Gordon and Breach Publishers, Basel 1995.
- 22) D. Reichel, R. Tacke, P. G. Jones, G. Lambrecht, J. Gross, E. Mutschler, M. Waelbroeck, Biological recognition of enantiomeric silanes and germanes: syntheses and antimuscarinic properties of the enantiomers of the Si/Ge analogues cyclohexyl(hydroxymethyl)phenyl(2-piperidinoethyl)silane and -germane and their methiodides, in: *Organosilicon Chemistry II – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 231-236, VCH, Weinheim 1996.
- 23) S. A. Wagner, S. Brakmann, R. Tacke, Biotransformation as a preparative method for the synthesis of optically active silanes, germanes, and digermanes: studies on the (*R*)-selective microbial reduction of MePh(Me₃C)EiC(O)Me (Ei = Si, Ge), MePh(Me₃Ge)GeC(O)Me, and MePh(Me₃Si)GeC(O)Me using resting cells of *Saccharomyces cerevisiae* (DHW S-3) as biocatalyst, in: *Organosilicon Chemistry II – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 237-242, VCH, Weinheim 1996.
- 24) R. Tacke, O. Dannappel, M. Mühleisen, Syntheses, structures, and properties of molecular λ^5 Si-silicates containing bidentate 1,2-diolato(2-) ligands derived from α -hydroxycarboxylic acids, acetohydroxamic acid, and oxalic acid: new results in the chemistry of pentacoordinate silicon, in: *Organosilicon Chemistry II – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 427-446, VCH, Weinheim 1996.
- 25) M. Mühleisen, R. Tacke, Syntheses and solution-state NMR studies of zwitterionic spirocyclic λ^5 Si-organosilicates containing two identical unsymmetrically substituted 1,2-benzenediolato(2-) ligands, in: *Organosilicon Chemistry II – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 447-451, VCH, Weinheim 1996.
- 26) O. Dannappel, R. Tacke, Intramolecular ligand exchange of zwitterionic spirocyclic bis[1,2-benzenediolato(2-)]organosilicates: ab initio studies of the bis[1,2-

- benzenediolato(2-)]hydridosilicate(1-) ion, in: *Organosilicon Chemistry II – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 453-458, VCH, Weinheim 1996.
- 27) E. Mutschler, H. A. Ensinger, J. Gross, A. Leis, K. Mendla, U. Moser, O. Pfaff, D. Reichel, K. Rühlmann, R. Tacke, M. Waelbroeck, J. Wehrle, G. Lambrecht, Muscarinic receptor subtypes – search for selective agonists and antagonists, in: *Perspective in Receptor Research* (Eds.: D. Giardinà, A. Piergentili, M. Pignini), pp. 51-65, Elsevier Science B.V., Amsterdam 1996.
- 28) R. Tacke, O. Dannappel, New zwitterionic silicon-oxygen compounds containing pentacoordinate silicon atoms: experimental and theoretical studies, in: *Tailor-made Silicon-Oxygen Compounds – From Molecules to Materials* (Eds.: R. Corriu, P. Jutzi), pp. 75-86, Vieweg, Braunschweig/Wiesbaden 1996.
- 29) J. Heermann, R. Tacke, P. G. Jones, Germanium analogues of zwitterionic spirocyclic $\lambda^5\text{Si}$ -silicates, in: *Organosilicon Chemistry III – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 466-470, Wiley-VCH, Weinheim 1998.
- 30) R. Tacke, S. A. Wagner, Chirality in bioorganosilicon chemistry, in: *The Chemistry of Organic Silicon Compounds*, Vol. 2, Part 3 (Eds.: Z. Rappoport, Y. Apeloig), pp. 2363-2400, John Wiley & Sons Ltd., Chichester 1998.
- 31) R. Tacke, T. Heinrich, T. Kornek, M. Merget, S. A. Wagner, J. Gross, C. Keim, G. Lambrecht, E. Mutschler, T. Beckers, M. Bernd, T. Reissmann, Bioorganogermanium chemistry: studies on C/Si/Ge bioisosterism, *Phosphorus, Sulfur and Silicon* **150/151**, 69-87 (1999).
- 32) R. Tacke, M. Pülm, B. Wagner, Zwitterionic pentacoordinate silicon compounds, *Adv. Organomet. Chem.* **44**, 221-273 (1999).
- 33) R. Tacke, Meilensteine in der Biochemie des Siliciums: von der Grundlagenforschung zu biotechnologischen Anwendungen, *Angew. Chem.* **111**, 3197-3200 (1999); Milestones in the biochemistry of silicon: from basic research to biotechnological applications, *Angew. Chem. Int. Ed.* **38**, 3015-3018 (1999).
- 34) M. Merget, R. Tacke, Biocatalysis in preparative organosilicon chemistry: microbial reduction of *rac*-1-(4-fluorophenyl)-1-methyl-1-sila-2-cyclohexanone and microbial hydrolysis of *rac*-(SiS,CR/SiR,CS)-2-acetoxy-1-(4-fluorophenyl)-1-methyl-1-silacyclohexane, in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 27-32, Wiley-VCH, Weinheim 2000.
- 35) M. Merget, S. Bartoschek, R. Willeke, R. Tacke, Preparation of silicon- and germanium-

- containing α -amino acids, in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 33-36, Wiley-VCH, Weinheim 2000.
- 36) R. Willeke, R. E. Neugebauer, M. Pülm, O. Dannappel, R. Tacke, Syntheses, structures, and properties of zwitterionic monocyclic $\lambda^5\text{Si}$ -silicates, in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 456-459, Wiley-VCH, Weinheim 2000.
- 37) R. E. Neugebauer, R. Bertermann, R. Tacke, Isomerization of chiral zwitterionic monocyclic $\lambda^5\text{Si}$ -silicates, in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 460-467, Wiley-VCH, Weinheim 2000.
- 38) A. Biller, B. Pfrommer, M. Pülm, R. Tacke, Zwitterionic spirocyclic $\lambda^5\text{Si}$ -silicates containing diolato(2-) ligands derived from acetohydroxamic acid and benzohydroxamic acid, in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 468-472, Wiley-VCH, Weinheim 2000.
- 39) B. Pfrommer, R. Tacke, Isoelectronic zwitterionic pentacoordinate silicon compounds with SiO_4C and SiO_5 frameworks, in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 473-477, Wiley-VCH, Weinheim 2000.
- 40) M. Pülm, R. Willeke, R. Tacke, The zwitterionic spirocyclic $\lambda^5\text{Si}$ -silicate [(dimethylammonio)methyl]bis[salicylato(2-)- O^1, O^3]silicate: experimental and computational studies, in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds.: N. Auner, J. Weis), pp. 478-488, Wiley-VCH, Weinheim 2000.
- 41) M. Bolboaca, A. Biller, C. Burschka, M. Penka, R. Tacke, W. Kiefer, Structural analysis of some anionic hexacoordinate silicon(IV) complexes by means of Raman and infrared spectroscopy, in: *Proceedings of the Eighteenth International Conference on Raman Spectroscopy* (Eds.: J. Mink, G. Jalsovszky, G. Keresztury), pp. 599-600, John Wiley & Sons Ltd., Chichester 2002.
- 42) R. Tacke, O. Seiler, Higher-coordinate silicon compounds with SiO_5 and SiO_6 skeletons, in: *Silicon Chemistry – From the Atom to Extended Systems* (Eds.: P. Jutzi, U. Schubert), pp. 324-337, Wiley-VCH, Weinheim 2003.
- 43) W. Bains, R. Tacke, Silicon chemistry as a novel source of chemical diversity in drug design, *Curr. Opin. Drug Discovery Dev.* **6**, 526-543 (2003).
- 44) O. Seiler, M. Fischer, M. Penka, R. Tacke, Synthesis and structural characterization of novel neutral hexacoordinate silicon(IV) complexes with SiO_2N_4 skeletons, in: *Organosilicon Chemistry VI – From Molecules to Materials*, Vol. 1 (Eds.: N. Auner,

- J. Weis), pp. 303-308, Wiley-VCH, Weinheim 2005.
- 45) J. O. Daiß, B. Müller, C. Burschka, R. Tacke, W. Bains, J. Warneck, σ Ligands of the 1,4'-silaspiro[tetralin-1,4'-piperidine] type and the serotonin/noradrenaline reuptake inhibitor sila-venlafaxine: studies on C/Si bioisosterism, in: *Organosilicon Chemistry VI – From Molecules to Materials*, Vol. 1 (Eds.: N. Auner, J. Weis), pp. 575-581, Wiley-VCH, Weinheim 2005.
- 46) a) R. Tacke, S. Metz, Odorant design based on the carbon/silicon switch strategy, in: *Current Topics in Flavor and Fragrance Research* (Eds.: P. Kraft, K. A. D. Swift), pp. 83-104, VHCA, Zürich, and Wiley-VCH, Weinheim 2008. b) R. Tacke, S. Metz, Odorant design based on the carbon/silicon switch strategy, *Chem. Biodiversity* **5**, pp. 920-941 (2008).
- 47) T. M. Klapötke, B. Krumm, A. Nieder, R. Tacke, D. Troegel, A study of alkyl and cycloalkyl nitrates and polynitrates, in: *Proceedings of the 11th Seminar on New Trends in Research of Energetic Materials (NTREM)*, University of Pardubice, Czech Republic, pp. 606-617 (2008).
- 48) T. M. Klapötke, B. Krumm, A. Nieder, R. Tacke, D. Troegel, Syntheses and studies of sensitive silane nitrates and their carbon analogues, in: *Proceedings of the 12th Seminar on New Trends in Research of Energetic Materials (NTREM)*, University of Pardubice, Czech Republic, pp. 260-274 (2009).
- 49) R. Tacke, S. Dörrich, Drug design based on the carbon/silicon switch strategy, *Top. Med. Chem.* **17**, 29-60 (2016).
- 50) R. Tacke, T. Ribbeck, Bis(amidinato)- and bis(gunidinato)silylenes and silylenes with one sterically demanding amidinato or guanidinato ligand: synthesis and reactivity, *Dalton Trans.* **46**, 13628-13659 (2017).

C) Patent Applications/Patents

- 1) R. Tacke, A. Bentlage, R. Towart, W. Vater (Bayer AG), Sila-substituierte 1,4-Dihydropyridin-Derivate, DE 2837477 A1 (13.03.1980) – US Pat. 4237137; Eur. Pat. 10130; Span. Pat. 483661; Israel. Pat. 58103; Canad. Pat. 1135699; Japan. Pat. 55/033497.
- 2) R. Tacke, B. Forth, H. Krähling, I. Bán (Kali-Chemie Pharma GmbH), Quartäre N-(2-Ethoxyethyl)-morpholinium-Verbindungen sowie Verfahren und Zwischenprodukte zu ihrer Herstellung und diese Verbindungen enthaltende Arzneimittel, DE 4037083 A1 (01.08.1991).
- 3) R. Tacke, B. Forth, H. Krähling, I. Bán (Kali-Chemie Pharma GmbH), Quartäre ((1S,5S)-6,6-dimethylbicyclo[3.1.1]-hept-2-yl)-substituierte N-(2-Ethoxyethyl)-morpholinium-Verbindungen sowie Verfahren und Zwischenprodukte zu ihrer Herstellung und diese Verbindungen enthaltende Arzneimittel, DE 4037109 A1 (01.08.1991).
- 4) G. Lambrecht, E. Mutschler, R. Tacke, L. K. Choo, C. Strohmann (Boehringer Ingelheim KG), Neue quaternisierte 1,1-Dicycloalkyl-4-amino-2-butin-1-ole und ihre Verwendung als Arzneimittel, DE 4007651 A1 (12.09.1991).
- 5) M. Arlt, H. Wurziger, R. Tacke, A. Abufarag, B. Ulmer (Merck Patent GmbH), Silicium- und Germanium-haltige “traceless” Linker zur Festphasensynthese, DE 19939815 A1 (22.02.2001).
- 6) R. Tacke, J. Daiss (Amedis Pharmaceuticals Ltd.), Silicon compounds, PCT Int. Pat. Appl. WO 03/037905 A1 (08.05.2003).
- 7) R. Tacke, T. Heinrich (Amedis Pharmaceuticals Ltd.), Silicon compounds, UK Pat. Appl. GB 2382575 A (04.06.2003).
- 8) R. Tacke, I. Richter (Julius-Maximilians-Universitaet Wuerzburg), Higher-coordinate silicates, PCT Int. Pat. Appl. WO 03/061640 A1 (31.07.2003).
- 9) R. Tacke, V. I. Handmann (Julius-Maximilians-Universität Würzburg), Silicon derivatives of amino acids, PCT Int. Pat. Appl. WO 03/082880 A1 (09.10.2003).
- 10) R. Tacke, T. Schmid (Amedis Pharmaceuticals Ltd.), Piperidinyldiarylsilanol compounds and their use in therapy, UK Pat. Appl. GB 2394714 A (05.05.2004).
- 11) J. G. Montana, I. Fleming, R. Tacke, J. Daiss (Amedis Pharmaceuticals Ltd.), Heterocyclic silicon compounds and their use in the treatment of diseases or conditions associated with GnRH (gonadotropin-releasing hormone), PCT Int. Pat. Appl.

- WO 2004/045625 A1 (03.06.2004).
- 12) J. G. Montana, G. A. Showell, I. Fleming, R. Tacke, J. Daiss (Amedis Pharmaceuticals Ltd.), Silicon compounds, PCT Int. Pat. Appl. WO 2004/048390 A1 (10.06.2004).
 - 13) J. G. Montana, G. A. Showell, R. Tacke (Amedis Pharmaceuticals Ltd.), Silicon compounds to be used as ligands for retinoid receptors, PCT Int. Pat. Appl. WO 2004/048391 A1 (10.06.2004).
 - 14) R. Tacke, T. Heinrich (Amedis Pharmaceuticals Ltd.), Silicon compounds, UK Pat. Appl. GB 2396863 A (07.07.2004).
 - 15) J. G. Montana, R. Tacke (Amedis Pharmaceuticals Ltd.), Silicon-containing compounds and their use, PCT Int. Pat. Appl. WO 2004/056836 A1 (08.07.2004).
 - 16) R. Tacke, J. Daiss, G. A. Showell, A. Richards (Amedis Pharmaceuticals Ltd.), Silicon compounds, UK Pat. Appl. GB 2397576 A (28.07.2004).
 - 17) G. A. Showell, D. Miller, A. K. Mandal, R. Tacke, J. Daiss (Amedis Pharmaceuticals Ltd.), 1-(2-Amino-1-phenyl-ethyl)-1-silacyclohexan-1-ol derivatives and use thereof in the preparation of a medicament, PCT Int. Pat. Appl. WO 2004/094436 A1 (04.11.2004).
 - 18) D. Miller, G. A. Showell, R. Conroy, J. Daiss, R. Tacke, D. Tebbe (Amedis Pharmaceuticals Ltd.), Organosilicon compounds and their use, PCT Int. Pat. Appl. WO 2005/005443 A1 (20.01.2005).
 - 19) R. Tacke, S. Dragota, V. Stanjek, C. Briehn (Wacker Chemie AG), λ 5Si-Silicat-funktionelle Prepolymere, DE 10 2006 035846 A1 (07.02.2008).
 - 20) P. Kraft, A. Sunderkötter, R. Tacke (Givaudan Schweiz SA), Alpha-silyl alcohols possessing olfactory properties reminiscent of patchouli oil, PCT Int. Pat. Appl. WO 2010/121979 A1.
 - 21) P. Kraft, A. Sunderkötter, R. Tacke (Givaudan SA), Carbinols having olfactory properties reminiscent of patchouli oil, PCT Int. Pat. Appl. WO 2011/033047 A1 (24.03.2011).
 - 22) Y Zou, P. Kraft, S. Doerrich, R. Tacke (Givaudan SA), Fragrance, PCT Int. Pat. Appl. WO 2015/089811 A1 (25.06.2015).

D) Abstracts

- 1) R. Tacke, U. Wannagat, IVth International Symposium on Organosilicon Chemistry, Moscow 1975, Abstracts, Vol. I, Part 2, pp. 3-4.
- 2) J. Ackermann, L. Steiling, R. Tacke, U. Wannagat, IVth International Symposium on Organosilicon Chemistry, Moscow 1975, Abstracts, Vol. I, Part 1, pp. 186-187.
- 3) R. Tacke, M. Strecker, E. Zimonyi-Hegedüs, Vth International Symposium on Organosilicon Chemistry, Karlsruhe 1978, Abstracts, p. 172.
- 4) R. Niedner, R. Tacke, M. Strecker, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **311**, Suppl. R28 (1980).
- 5) R. Tacke, M. T. Attar-Bashi, A. Bentlage, H. Lange, H. Linoh, W.S. Sheldrick, M. Strecker, VIth International Symposium on Organosilicon Chemistry, Budapest 1981, Abstracts, p. 96.
- 6) R. Tacke, M. T. Attar-Bashi, A. Bentlage, H. Lange, VIth International Symposium on Organosilicon Chemistry, Budapest 1981, Abstracts, p. 204.
- 7) G. Lambrecht, H. Linoh, U. Moser, E. Mutschler, M. Strecker, R. Tacke, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **319**, Suppl. R59 (1982).
- 8) R. Tacke, H. Lange, A. Bentlage, Chemie-Dozententagung, Kaiserslautern 1982, Vortragsreferate, p. 118.
- 9) R. Tacke, Symposium on Bioorganic Chemistry and Drug Design, Riga 1982, Abstracts, p. 215.
- 10) R. Tacke, H. Linoh, M. Strecker, Chemie-Dozententagung, Dortmund 1983, Vortragsreferate, p. 95.
- 11) R. Tacke, H. Linoh, W. S. Sheldrick, L. Ernst, G. Lambrecht, U. Moser, E. Mutschler, 1. Gesamtkongreß der Pharmazeutischen Wissenschaften, München 1983, Abstracts, p. 129.
- 12) G. Lambrecht, U. Moser, E. Mutschler, H. Linoh, R. Tacke, 1. Gesamtkongreß der Pharmazeutischen Wissenschaften, München 1983, Abstracts, p. 179.
- 13) G. Lambrecht, U. Moser, E. Mutschler, J. Wess, H. Linoh, M. Strecker, R. Tacke, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **325**, Suppl. R62 (1984).
- 14) G. Lambrecht, H. Linoh, U. Moser, E. Mutschler, M. Strecker, R. Tacke, J. Wess, VIIIth International Symposium on Medicinal Chemistry, Uppsala 1984, Abstracts, p. 123.

- 15) R. Tacke, VIIth International Symposium on Organosilicon Chemistry, Kyoto 1984, Abstracts, p. 62.
- 16) R. Tacke, H. Linoh, G. Lambrecht, U. Moser, E. Mutschler, VIIth International Symposium on Organosilicon Chemistry, Kyoto 1984, Abstracts, p. 64.
- 17) R. Tacke, H. Zilch, B. Stumpf, L. Ernst, D. Schomburg, VIIth International Symposium on Organosilicon Chemistry, Kyoto 1984, Abstracts, p. 201.
- 18) R. Tacke, Gunma-Symposium "Organosilicon Chemistry Directed to Practical Use", Kiryu 1984, Abstracts, p. 33.
- 19) R. Tacke, Chinese-German Symposium on Silicon Chemistry, Taichung 1984, Abstracts, pp. 11-12.
- 20) G. Lambrecht, H. Linoh, U. Moser, E. Mutschler, R. Tacke, *Naunyn-Schmiedeberg's Arch. Pharmacol* **329**, Suppl. R73 (1985).
- 21) R. Tacke, H. Zilch, B. Stumpf, L. Ernst, D. Schomburg, Chemie-Dozententagung, Aachen 1985, Vortragsreferate, p. 67.
- 22) R. Tacke, XIXth Organosilicon Symposium, Baton Rouge 1985, Abstracts, p. 28.
- 23) G. Lambrecht, U. Moser, J. Wess, J. Riotte, H. Fuder, H. Kilbinger, H. Müller, H. Linoh, R. Tacke, H. Zilch, E. Mutschler, 2nd International Symposium on Subtypes of Muscarinic Receptors, Boston 1985, Abstracts, p. 38; *Trends Pharmacol. Sci.* **7**, Suppl. 91 (1986).
- 24) R. Tacke, F. Wuttke, H. Zilch, H. Andree, C. Sylдатk, F. Wagner, L. Ernst, D. Schomburg, VIth FECHEM Conference on Organometallic Chemistry, Riga 1985, Abstracts, p. 188.
- 25) J. Wess, U. Moser, J. Riotte, H. Linoh, R. Tacke, H. Zilch, E. Mutschler, Jahrestagung der Deutschen Pharmazeutischen Gesellschaft, Braunschweig 1985, Abstracts.
- 26) C. Sylдатk, H. Andree, F. Wagner, F. Wuttke, H. Zilch, R. Tacke, 4. DECHEMA-Jahrestagung der Biotechnologen, Frankfurt/Main 1986, Abstracts, pp. 171-172.
- 27) R. Tacke, 192nd ACS National Meeting, Anaheim 1986, Abstracts, GEOC 0132.
- 28) G. Lambrecht, U. Moser, J. Riotte, J. Wess, H. Linoh, J. Pikies, M. Strecker, R. Tacke, H. Zilch, E. Mutschler, IXth International Symposium on Medicinal Chemistry, Berlin 1986, Abstracts, p. 263.
- 29) R. Tacke, K. Fritsche, H. Hengelsberg, A. Tafel, F. Wuttke, H. Zilch, C. Sylдатk, H. Andree, A. Stoffregen, F. Wagner, VIIIth International Symposium on Organosilicon

- Chemistry, St. Louis 1987, Abstracts, p. 51.
- 30) R. Tacke, C. Strohmamm, H. Zilch, G. Lambrecht, U. Moser, E. Mutschler, VIIIth International Symposium on Organosilicon Chemistry, St. Louis 1987, Abstracts, p. 222.
 - 31) S. Sarge, H. K. Cammenga, B. Becker, R. Rohr-Aehle, R. Tacke, IVth European Symposium on Thermal Analysis and Calorimetry, Jena 1987, Workbook, E35.
 - 32) G. Lambrecht, U. Moser, M. Wagner, J. Wess, G. Gmelin, K. Raseiner, C. Strohmamm, R. Tacke, E. Mutschler, 3rd International Symposium on Subtypes of Muscarinic Receptors, Sydney 1987, Abstracts; *Trends Pharmacol. Sci.* **9**, Suppl. 82 (1988).
 - 33) E. Giraldo, G. Lambrecht, N. Mayer, E. Mutschler, C. Strohmamm, R. Tacke, 6th Camerino-Noordwijkerhout Symposium, Recent Advances in Receptor Chemistry, Camerino 1987, Abstracts, pp. 152-153.
 - 34) R. Tacke, B. Becker, R. Rohr-Aehle, S. Sarge, H.K. Cammenga, 21. GDCh-Hauptversammlung, Berlin 1987, Programm und Kurzreferate, p. 131.
 - 35) N. M. Rettenmayr, J. F. Rodrigues de Miranda, E. Mutschler, C. Strohmamm, R. Tacke, H.-M. Schiebel, L. Witte, F. G. M. Russel, C. A. M. van Ginneken, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **337**, Suppl. R92 (1988).
 - 36) R. Tacke, K. Fritsche, H. Hengelsberg, A. Tafel, F. Wuttke, H. Zilch, C. Syldatk, A. Brans, F. Wagner, 1st International Symposium on Separation of Chiral Molecules, Paris 1988, Programme, pp. 30-31.
 - 37) R. Tacke, H. Hengelsberg, F. Wuttke, H. Zilch, C. Syldatk, A. Brans, K. Fritsche, F. Wagner, B. Stumpf, 1st International Symposium on Separation of Chiral Molecules, Paris 1988, Programme, p. 31.
 - 38) K. Fritsche, C. Syldatk, F. Wagner, H. Hengelsberg, R. Tacke, W.-A. König, 8th International Biotechnology Symposium, Paris 1988, Abstract Book, p. 154.
 - 39) G. Lambrecht, R. Tacke, E. Mutschler, Xth International Symposium on Medicinal Chemistry, Budapest 1988, Abstracts, p. 56.
 - 40) R. Feifel, U. Moser, A. Aasen, C. Strohmamm, R. Tacke, E. Mutschler, G. Lambrecht, Xth International Symposium on Medicinal Chemistry, Budapest 1988, Abstracts, p. 233.
 - 41) C. Strohmamm, H.-M. Schiebel, L. Witte, N. Rettenmayr, G. Lambrecht, E. Mutschler, R. Tacke, Xth International Symposium on Medicinal Chemistry, Budapest 1988, Abstracts, p. 298.

- 42) G. Lambrecht, E. Mutschler, M. Eltze, H. Linoh, R. Tacke, M. Waelbroeck, *Gastroenterology International* **1**, Suppl. 1, Abstract 92.
- 43) M. Eltze, G. Lambrecht, E. Mutschler, K. Rafeiner, C. Strohmann, R. Tacke, J. Wess, G. Gmelin, *Gastroenterology International* **1**, Suppl. 1, Abstract 142.
- 44) R. Feifel, A. Aasen, C. Strohmann, R. Tacke, G. Lambrecht, E. Mutschler, *Arch. Pharm. (Weinheim)* **321**, 638 (1988).
- 45) H.-D. Höltje, J. Brüggmann, E. Mutschler, G. Lambrecht, R. Tacke, *Arch. Pharm. (Weinheim)* **321**, 646 (1988).
- 46) R. Feifel, A. Aasen, C. Strohmann, R. Tacke, M. Waelbroeck, J. Christophe, G. Lambrecht, E. Mutschler, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **338**, Suppl. R61 (1988).
- 47) E. Mutschler, U. Moser, R. Feifel, K. Rafeiner, C. Strohmann, R. Tacke, G. Lambrecht, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **338**, Suppl. R61 (1988).
- 48) G. Lambrecht, R. Feifel, B. Forth, C. Strohmann, R. Tacke, E. Mutschler, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **338**, Suppl. R60 (1988).
- 49) M. Waelbroeck, M. Tastenoy, J. Camus, G. Lambrecht, E. Mutschler, R. Tacke, J. Christophe, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **338**, Suppl. R61 (1988).
- 50) C. Syldatk, F. Wagner, R. Tacke, European Conference on Biotechnology, Verona 1988, Abstracts, pp. 239-240.
- 51) G. Lambrecht, R. Feifel, C. Strohmann, R. Tacke, U. Moser, E. Mutschler, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **339**, Suppl. R81 (1989).
- 52) H. Tietz, R. Lindmar, K. Löffelholz, C. Strohmann, R. Tacke, G. Lambrecht, E. Mutschler, *Trends Pharmacol. Sci.* **10**, Suppl. 107 (1989).
- 53) R. Feifel, J. F. Rodrigues de Miranda, C. Strohmann, R. Tacke, G. Lambrecht, E. Mutschler, *Trends Pharmacol. Sci.* **10**, Suppl. 110 (1989).
- 54) L. K. Choo, M. Wagner, B. Unterhalt, C. Middelberg, R. Tacke, C. Strohmann, A. Tafel, E. Mutschler, G. Lambrecht, *Trends Pharmacol. Sci.* **10**, Suppl. 113-114 (1989).
- 55) J. Brüggmann, H.-D. Höltje, E. Mutschler, G. Lambrecht, R. Tacke, *Trends Pharmacol. Sci.* **10**, Suppl. 114 (1989).
- 56) F. Dörje, T. Friebe, R. Tacke, E. Mutschler, G. Lambrecht, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **341**, Suppl. R79 (1990).
- 57) E. Mutschler, R. Feifel, U. Moser, R. Tacke, J. Wess, G. Lambrecht, *Eur. J. Pharmacol.*

- 183**, 117-119 (1990).
- 58) R. Feifel, J. F. Rodrigues de Miranda, M. Waelbroeck, J. Christophe, K. Rafeiner, R. Tacke, M. Wagner-Röder, E. Mutschler, G. Lambrecht, *Eur. J. Pharmacol.* **183**, 1726 (1990).
- 59) G. Lambrecht, T. P. Friebe, R. Feifel, N. Rettenmayr, M. Wagner-Röder, C. Strohmann, R. Tacke, E. Mutschler, *Arch. Pharm. (Weinheim)* **323**, 790 (1990).
- 60) P. Schneider, H. K. Cammenga, F. Wiesenberger, R. Tacke, Thermische Analyse an nieder- und hochmolekularen Stoffen, GEFTA TA-Symposium, Karlsruhe 1990, Programmheft, p. 21.
- 61) T. P. Friebe, R. Feifel, N. Rettenmayr, A. J. Aasen, P. Sjö, A. Tafel, R. Tacke, E. Mutschler, G. Lambrecht, *Arch. Pharm. (Weinheim)* **323**, 791 (1990).
- 62) G. Lambrecht, T. P. Friebe, H. Egerer, A. J. Aasen, P. Sjö, A. Tafel, R. Tacke, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **343**, Suppl. R90 (1991).
- 63) E. Bungardt, G. Lambrecht, U. Moser, R. Tacke, E. Mutschler, *Pharmazie in unserer Zeit* **20**, 119-120 (1991).
- 64) E. Mutschler, F. Dörje, U. Moser, R. Tacke, J. Wess, G. Lambrecht, 33rd IUPAC Congress, Budapest 1991, Book of Abstracts, p. 136.
- 65) T. P. Friebe, M. Waelbroeck, C. Strohmann, K. Mahner, A. Tafel, R. Tacke, J. Christophe, E. Mutschler, G. Lambrecht, 8th Camerino-Noordwijkerhout Symposium, Trends in Receptor Research, Camerino 1991, Abstracts, pp. 196-197.
- 66) H. P. Egerer, T. P. Friebe, M. Waelbroeck, A. Tafel, R. Tacke, J. Christophe, G. Lambrecht, E. Mutschler, 8th Camerino-Noordwijkerhout Symposium, Trends in Receptor Research, Camerino 1991, Abstracts, pp. 198-199.
- 67) R. Tacke, J. Becht, A. Lopez-Mras, G. Mattern, J. Sperlich, C. Strohmann, F. Wiesenberger, Kolloquium über Organosiliciumchemie 1991, Gaußig, Referateband, pp. 64-68.
- 68) R. Tacke, J. Becht, A. Lopez-Mras, J. Sperlich, C. Strohmann, F. Wiesenberger, XXV Silicon Symposium, Los Angeles 1992, Abstracts, p. 61.
- 69) R. Tacke, S. Brakmann, H. Hengelsberg, K. Mahner, S. Wagner, 203rd ACS National Meeting, San Francisco 1992, Book of Abstracts, Part II, INOR 733.
- 70) J. Gross, E. Mutschler, R. Tacke, G. Lambrecht, 5. Frühjahrstagung der Deutschen Pharmazeutischen Gesellschaft e.V., Friedrichsbrunn 1993, Abstracts.

- 71) E. K. Vockert, H. P. Egerer, R. Tacke, G. Lambrecht, E. Mutschler, *Life Sci.* **52**, 551 (1993).
- 72) M. Eltze, E. Mutschler, U. Moser, T. Friebe, C. Gubitz, R. Tacke, G. Lambrecht, *Life Sci.* **52**, 579 (1993).
- 73) R. Tacke, M. Kropfgans, D. Reichel, H. J. Egerer, G. Lambrecht, E. Mutschler, J. Christophe, M. Waelbroeck, XXVIth Silicon Symposium, Indianapolis 1993, Abstracts, H-8.
- 74) R. Tacke, Xth International Symposium on Organosilicon Chemistry, Poznan 1993, Book of Abstracts, Abstract I-26, p. 32.
- 75) R. Tacke, M. Kropfgans, D. Reichel, J. Sperlich, S. A. Wagner, H. J. Egerer, G. Lambrecht, E. Mutschler, J. Christophe, M. Waelbroeck, Xth FECHEM Conference on Organometallic Chemistry, Agia Pelagia/Kreta 1993, Book of Abstracts, Abstract P113, p. 213.
- 76) P. B. Schneider, A. Steer, U. Gloistein, H. K. Cammenga, F. Wiesenberger, M. Kropfgans, R. Tacke, Jahrestagung der Gesellschaft für Thermische Analyse e.V. (GEFTA) und der Schweizerischen Gesellschaft für Thermodynamik und Kalorimetrie (STK), Neuherberg 1993, Abstracts.
- 77) R. Tacke, J. Becht, O. Dannappel, A. Lopez-Mras, M. Mühleisen, XXVIIth Silicon Symposium, Troy 1994, Abstract B-4.
- 78) J. Gross, O. Pfaff, M. Waelbroeck, J. Camus, M. Tastenoy, R. Tacke, E. Mutschler, G. Lambrecht, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **349**, Suppl. R75 (1994).
- 79) D. Terunuma, K. Sato, H. Nohira, R. Tacke, The Sendai International Symposium on "The Frontiers of Organosilicon Chemistry", Sendai 1994, Abstracts, pp. 114-115.
- 80) R. Tacke, O. Dannappel, XXVIIIth Organosilicon Symposium, Gainesville 1995, Abstract B-10.
- 81) D. Reichel, P. G. Jones, G. Lambrecht, J. Gross, E. Mutschler, X. Hou, M. Waelbroeck, R. Tacke, XXVIIIth Organosilicon Symposium, Gainesville 1995, Abstract P-59.
- 82) E. Mutschler, U. Moser, R. Tacke, G. Lambrecht, 10th Camerino-Noordwijkerhout Symposium, Perspectives in Receptor Research, Camerino 1995, Abstracts, pp. 63-64.
- 83) J. Gross, O. Pfaff, T. Friebe, R. Tacke, M. Waelbroeck, E. Mutschler, G. Lambrecht, 10th Camerino-Noordwijkerhout Symposium, Perspectives in Receptor Research, Camerino 1995, Abstracts, pp. 111-112.

- 84) J. Gross, O. Pfaff, D. Reichel, R. Tacke, A. Leis, K. Rühlmann, *Naunyn-Schmiedeberg=Arch. Pharmacol.* **353**, Suppl. R82 (1996).
- 85) R. Tacke, XX. Colloquy on Organometallic Chemistry, Germany-Poland, Bad Kösen 1996, Abstract book, p. 5
- 86) R. Tacke, J. Heermann, B. Pfrommer, M. Pülm, Organogermanium Mini-Symposium, London/Ontario 1997, Abstract G-10.
- 87) R. Tacke, A. Biller, J. Heermann, T. Paschold, B. Pfrommer, M. Pülm, B. Ulmer, R. Willeke, 30th Organosilicon Symposium, London/Ontario 1997, Abstract B-2.
- 88) R. Tacke, 80th Canadian Society for Chemistry Conference and Exhibition, Windsor/Ontario 1997, Abstract 468 OR2.
- 89) R. Tacke, R. Bertermann, R. Neugebauer, B. Pfrommer, M. Pülm, I. Richter, R. Willeke, 31st Organosilicon Symposium, New Orleans 1998, Abstract B-15.
- 90) M. Merget, R. Tacke, 31st Organosilicon Symposium, New Orleans 1998, Abstract P-52.
- 91) M. Merget, S. Bartoschek, R. Willeke, R. Tacke, 31st Organosilicon Symposium, New Orleans 1998, Abstract P-53.
- 92) R. Tacke, IXth International Conference on the Coordination and Organometallic Chemistry of Germanium, Tin, and Lead, Melbourne 1998, Abstract PL4.
- 93) R. Tacke, I. Richter, B. Wagner, R. Willeke, 32nd Organosilicon Symposium, Milwaukee 1999, Abstract A-10.
- 94) I. Richter, J. Heermann, B. Wagner, R. Willeke, R. Tacke, 32nd Organosilicon Symposium, Milwaukee 1999, Abstract P-33.
- 95) D. Kost, I. Kalikhman, S. Krivonos, R. Neugebauer, R. Willeke, R. Tacke, 12th International Symposium on Organosilicon Chemistry, Sendai 1999, Abstracts, p. 64.
- 96) R. Tacke, 12th International Symposium on Organosilicon Chemistry, Sendai 1999, Abstracts, p. 102.
- 97) S. A. Wagner, R. Tacke, 12th International Symposium on Organosilicon Chemistry, Sendai 1999, Abstracts, p. 145.
- 98) R. Bertermann, R. Tacke, 12th International Symposium on Organosilicon Chemistry, Sendai 1999, Abstracts, p. 145.
- 99) M. Merget, T. Schmid, V. I. Handmann, R. Tacke, 12th International Symposium on Organosilicon Chemistry, Sendai 1999, Abstracts, p. 146.

- 100) R. Bertermann, R. Tacke, 12th International Symposium on Organosilicon Chemistry, Sendai 1999, Abstracts, p. 174.
- 101) M. Merget, B. Wagner, R. Tacke, 12th International Symposium on Organosilicon Chemistry, Sendai 1999, Abstracts, p. 180.
- 102) R. Tacke, 12th International Symposium on Organosilicon Chemistry B Post-Symposium in Kyoto, Kyoto 1999, Abstracts, p. 9.
- 103) R. Bertermann, R. Tacke, 21. Diskussionstagung der Fachgruppe Magnetische Resonanzspektroskopie, Würzburg 1999, Abstract, P126.
- 104) R. Tacke, 9. Diskussionstagung Anorganisch-Technische Chemie (DECHEMA), Frankfurt 2000, Abstracts.
- 105) V. I. Handmann, C. Burschka, R. Tacke, 33rd Organosilicon Symposium, Saginaw 2000, Abstract PB-15.
- 106) R. Willeke, M. Penka, R. Tacke, 33rd Organosilicon Symposium, Saginaw 2000, Abstract PB-16.
- 107) T. Schmid, C. Burschka, M. Hofmann, M. Penka, H. Surburg, R. Tacke, 33rd Organosilicon Symposium, Saginaw 2000, Abstract PB-17.
- 108) I. Richter, A. Biller, C. Burschka, M. Penka, R. Tacke, 33rd Organosilicon Symposium, Saginaw 2000, Abstract PB-18.
- 109) T. Kornek, T. Heinrich, C. Burschka, C. Keim, G. Lambrecht, E. Mutschler, R. Tacke, 33rd Organosilicon Symposium, Saginaw 2000, Abstract PB-19.
- 110) R. Willeke, M. Penka, R. Tacke, The Ninth International Conference on Inorganic Ring Systems, Saarbrücken 2000, Abstract F-23.
- 111) M. Willeke, C. Burschka, R. Willeke, R. Tacke, The Ninth International Conference on Inorganic Ring Systems, Saarbrücken 2000, Abstract P-13.
- 112) A. Biller, I. Richter, O. Seiler, R. Tacke, The Ninth International Conference on Inorganic Ring Systems, Saarbrücken 2000, Abstract P-111.
- 113) S. Duda-Johner, J. Daiß, A. Raasch, C. Tränkle, R. Tacke, U. Holzgrabe, K. Mohr, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **363**, Suppl. R25 (2001).
- 114) T. Heinrich, M. Penka, R. Tacke, 34th Organosilicon Symposium, White Plains 2001, Abstract PS1-6.
- 115) J. Daiß, S. Duda-Johner, U. Holzgrabe, K. Mohr, R. Tacke, 34th Organosilicon Symposium, White Plains 2001, Abstract PS1-7.

- 116) O. Seiler, I. Richter, C. Burschka, M. Penka, R. Tacke, 34th Organosilicon Symposium, White Plains 2001, Abstract PS1-8.
- 117) I. Richter, M. Penka, R. Tacke, 34th Organosilicon Symposium, White Plains 2001, Abstract PS2-3.
- 118) O. Seiler, C. Burschka, S. Wagner, R. Tacke, Xth International Conference on the Coordination and Organometallic Chemistry of Germanium, Tin and Lead, Bordeaux 2001, Abstract 2P60.
- 119) R. Tacke, GDCh-Jahrestagung Chemie 2001, Würzburg 2001, Sammelband Kurzreferate, p. 134.
- 120) T. Heinrich, M. Penka, R. Tacke, GDCh-Jahrestagung Chemie 2001, Würzburg 2001, Sammelband Kurzreferate, p. 162.
- 121) Raasch, S. Duda-Johner, J. Daiß, O. Scharfenstein, C. Tränkle, K. Mohr, R. Tacke, U. Holzgrabe, GDCh-Jahrestagung Chemie 2001, Würzburg 2001, Sammelband Kurzreferate, p. 163.
- 122) Kahle, U. Holzgrabe, M. Merget, R. Tacke, *Arch. Pharm. Pharm. Med. Chem.* **334**, Suppl. 2, 39 (2001).
- 123) S. Duda-Johner, J. Daiß, U. Holzgrabe, R. Tacke, K. Mohr, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **365**, Suppl. R25 (2002).
- 124) J. O. Daiß, T. Schmid, H. Surburg, R. Tacke, 13th International Symposium on Organosilicon Chemistry – 35th Organosilicon Symposium, Guanajuato 2002, Abstract P1-48, p. 122.
- 125) V. I. Handmann, R. Tacke, 13th International Symposium on Organosilicon Chemistry – 35th Organosilicon Symposium, Guanajuato 2002, Abstract P1-52, p. 124.
- 126) S. A. Wagner, I. Richter, K. Barth, C. Burschka, 13th International Symposium on Organosilicon Chemistry – 35th Organosilicon Symposium, Guanajuato 2002, Abstract P2-16, p. 146.
- 127) O. Seiler, N. Buggisch, M. Penka, R. Tacke, 13th International Symposium on Organosilicon Chemistry – 35th Organosilicon Symposium, Guanajuato 2002, Abstract P2-45, p. 161.
- 128) S. Dragota, R. Bertermann, C. Burschka, R. Tacke, 13th International Symposium on Organosilicon Chemistry – 35th Organosilicon Symposium, Guanajuato 2002, Abstract P2-46, p. 162.

- 129) M. Penka, R. Bertermann, A. Biller, O. Seiler, M. Kaupp, R. Tacke, Conference on Electron Density: Measurement, Calculation, Application, Würzburg 2002, Abstract P 3.10.
- 130) O. Seiler, N. Buggisch, M. Penka, D. Tebbe, R. Tacke, Conference on Electron Density: Measurement, Calculation, Application, Würzburg 2002, Abstract P 3.11.
- 131) M. Albrecht, J. O. Daiß, R. Tacke, K. Mohr, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **367**, Suppl. 1, R26 (2003).
- 132) G. T. Frunjang, M. Muth, U. Holzgrabe, J. O. Daiß, R. Tacke, K. Mohr, *Naunyn-Schmiedeberg's Arch. Pharmacol.* **367**, Suppl. 1, R26 (2003).
- 133) J. O. Daiß, R. Tacke, W. Bains, J. Warneck, 2nd European Organosilicon Days, München 2003, Abstract A8.
- 134) J. O. Daiß, K. Barth, C. Burschka, P. Hey, K. Klemm, I. Richter, R. Tacke, 2nd European Organosilicon Days, München 2003, Abstract P131.
- 135) O. Seiler, M. Fischer, M. Penka, R. Tacke, 2nd European Organosilicon Days, München 2003, Abstract P146.
- 136) B. Müller, J. O. Daiß, R. Tacke, 2nd European Organosilicon Days, München 2003, Abstract P162.
- 137) R. Tacke, 12th All-Polish Symposium of Organosilicon Compounds, Dymaczewo 2003, Abstracts, p. 11.
- 138) M. Albrecht, J. O. Daiß, R. Tacke, K. Mohr, DPhG-Jahrestagung 2003, Würzburg 2003, Abstract P P2, p .101.
- 139) C. Schmalenbach, E. Heller, M. Muth, J. O. Daiß, R. Tacke, U. Holzgrabe, K. Mohr, *Naunyn-Schmiedeberg's Arch, Pharmacol.* **369**, Suppl. 1, R20 (2004).
- 140) M. Albrecht, J. O. Daiß, R. Tacke, K. Mohr, *Naunyn-Schmiedeberg's Arch, Pharmacol.* **369**, Suppl. 1, R23 (2004).
- 141) J. O. Daiß, W. Bains, G. A. Showell, J. Warneck, R. Tacke, 37th Silicon Symposium, Philadelphia, 2004, Abstract B-10.
- 142) M. Penka, S. Dragota, R. Bertermann, C. Burschka, R. Tacke, 37th Silicon Symposium, Philadelphia, 2004, Abstract P-39.
- 143) T. Heinrich, B. Müller, R. Bertermann, C. Burschka, A. Hamacher, M.U. Kassack, B. Theis, R. Tacke, 37th Silicon Symposium, Philadelphia, 2004, Abstract P-40.
- 144) O. Seiler, C. Burschka, S. Metz, M. Penka, R. Tacke, 37th Silicon Symposium,

- Philadelphia, 2004, Abstract P-41.
- 145) F. Popp, C. Burschka, J. O. Daiss, R. Tacke, 14th International Symposium on Organosilicon Chemistry – 3rd European Silicon Days, Würzburg 2005, Abstract P016.
- 146) R. Tacke, 4th Organosilicon Days, Bath 2007, Abstracts p. 37, p. 38.
- 147) S. Cota, C. Burschka, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P18, p. 97.
- 148) R. Haga, C. Burschka, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P40, p. 119.
- 149) S. Metz, C. Burschka, D. Platte, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P76, p. 154.
- 150) J. Nätscher, F. Popp, C. Burschka, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P85, p. 163.
- 151) M. W. Büttner, S. Metz, B. Nguyen, P. Kraft, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P88, p. 166.
- 152) F. Popp, B. Müller, C. Burschka, R. Bertermann, A. Hamacher, M.U. Kassack, D. Schepmann, B. Wunsch, U. Jurva, E. Wellner, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P99, p. 177.
- 153) M. W. Büttner, C. Burschka, K. Junold, P. Kraft, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P123, p. 202.
- 154) B. Theis, C. Burschka, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P124, p. 203.
- 155) T. M. Klapötke, B. Krumm, R. Ilg, D. Troegel, R. Tacke, 4th Organosilicon Days, Bath 2007, Abstract P127, p. 205.
- 156) R. Tacke, ICBIC XIII - 13th International Conference in Biological Inorganic Chemistry, Wien 2007, Abstract KL06, p. S8.
- 157) R. Tacke, C. Burschka, S. Metz, B. Theis, 41th Silicon Symposium, San Francisco 2008, Abstract B-9, p. 77.
- 158) S. Cota, C. Burschka, R. Tacke, 41th Silicon Symposium, San Francisco 2008, Abstract P-5, p. 108.
- 159) S. Falgner, C. Burschka, A. Böhm, J. O. Daiss, R. Tacke, 41th Silicon Symposium, San Francisco, 2008, Abstract P-6, p. 109.
- 160) M. Fischer, B. Müller, R. Bertermann, C. Burschka, G. Meyerhans, D. Schepmann, B. Wunsch, R. Tacke, 41th Silicon Symposium, San Francisco 2008, Abstract P-8,

- p. 111.
- 161) J. B. Nätscher, M. W. Büttner, C. Burschka, R. Tacke, 41th Silicon Symposium, San Francisco 2008, Abstract P-18, p. 121.
- 162) B. Theis, C. Burschka, R. Tacke, 41th Silicon Symposium, San Francisco 2008, Abstract P-28, p. 131.
- 163) D. Troegel, F. Möller, R. Ilg, C. Buschka, R. Tacke, 41th Silicon Symposium, San Francisco 2008, Abstract P-29, p. 132.
- 164) R. Tacke, ISOS XV – The 15th International Symposium on Organosilicon Chemistry, Jeju Island, Korea, 2008, PL3, p. 43.
- 165) B. Theis, C. Burschka, R. Tacke, ISOS XV – The 15th International Symposium on Organosilicon Chemistry, Jeju Island, Korea, 2008, P39, p. 131.
- 166) J. Nätscher, S. Metz, C. Burschka, P. Kraft, R. Tacke, ISOS XV – The 15th International Symposium on Organosilicon Chemistry, Jeju Island, Korea, 2008, P98, p. 160.
- 167) D. Troegel, F. Möller, C. Burschka, R. Tacke, ISOS XV – The 15th International Symposium on Organosilicon Chemistry, Jeju Island, Korea, 2008, P99, p. 161.
- 168) R. Tacke, C. Burschka, S. Metz, B. Theis, Post ISOS XV Symposium, Takasaki, Gunma, Japan, 2008, Abstracts, PL-4, p. 11.
- 169) J. B. Nätscher, S. Metz, C. Burschka, K. Götz, M. Kaupp, P. Kraft, R. Tacke, 42nd Silicon Symposium, Long Branch, NJ, USA, 2008, Abstract A-8, p. 40.
- 170) S. Falgner, C. Burschka, R. Tacke, 42nd Silicon Symposium, Long Branch, NJ, USA, 2008, Abstract A-9, p. 41.
- 171) B. Theis, S. Metz, F. Back, C. Burschka, R. Tacke, 42nd Silicon Symposium, Long Branch, NJ, USA, 2008, PST 25, p. 80.
- 172) K. Junold, C. Burschka, R. Tacke, 42nd Silicon Symposium, Long Branch, NJ, USA, 2008, PST 29, p. 84.
- 173) A. Berkefeld, C. Burschka, R. Tacke, 42nd Silicon Symposium, Long Branch, NJ, USA, 2008, PST 30, p. 85.
- 174) M. Fischer, B. Müller, R. Bertermann, C. Burschka, R. Tacke, 42nd Silicon Symposium, Long Branch, NJ, USA, 2008, PST 31, p. 86.
- 175)
- 176)

E) Lectures Given at Invitation

- 1) Pharmakologisches Institut für Naturwissenschaftler der Universität Frankfurt/Main, Germany (FRG), 06.06.1978.
- 2) Kali-Chemie AG, Hannover, Germany (FRG), 26.02.1979.
- 3) Schering AG, Berlin, Germany (FRG), 15.03.1979.
- 4) Symposium on Bioorganic Chemistry and Drug Design, Riga, USSR, 27.05.1982.
- 5) Institut für Anorganische Chemie der Universität Clausthal, Germany (FRG), 16.06.1982.
- 6) Institut für Anorganische Chemie der Universität Karlsruhe, Germany (FRG), 21.06.1983.
- 7) Dr. Karl Thomae GmbH, Biberach/Riss, Germany (FRG), 12.07.1983.
- 8) Fachbereich Chemie der Universität Bremen, Germany (FRG), 15.12.1983.
- 9) Institut für Anorganische Chemie der Universität Hannover, Germany (FRG), 09.02.1984.
- 10) Deutsche Pharmazeutische Gesellschaft, Hamburg, Germany (FRG), 08.05.1984.
- 11) Pharmazeutisches Institut Poppelsdorf der Universität Bonn, Germany (FRG), 21.05.1984.
- 12) Institut für Pharmazeutische Chemie der Universität Münster, Germany (FRG), 28.06.1984.
- 13) VIIth International Symposium on Organosilicon Chemistry, Kyoto, Japan, 11.09.1984.
- 14) Gunma-Symposium "Organosilicon Chemistry Directed to Practical Use", Kiryu, Japan, 20.09.1984.
- 15) Chinese-German Symposium on Silicon Chemistry, Taichung, Taiwan, 22.09.1984.
- 16) Institut für Pharmazeutische Chemie der Universität Frankfurt/Main, Germany (FRG), 07.02.1985.
- 17) University of Puerto Rico, Department of Chemistry, Rio Piedras, Puerto Rico, 17.04.1985.
- 18) Washington University, Department of Chemistry, St. Louis, USA, 22.04.1985.
- 19) Tulane University, Department of Chemistry, New Orleans, USA, 24.04.1985.
- 20) XIXth Organosilicon Symposium, Baton Rouge, USA, 27.04.1985.
- 21) Institut für Anorganische und Analytische Chemie der Universität Freiburg, Germany

- (FRG), 07.05.1985.
- 22) Institut für Anorganische Chemie der Universität Münster, Germany (FRG), 10.05.1985.
 - 23) Gesellschaft Deutscher Chemiker, Bonn, Germany (FRG), 04.06.1985.
 - 24) Institut für Anorganische Chemie der Universität Frankfurt/Main, Germany (FRG), 18.06.1985.
 - 25) Institut für Anorganische Chemie der Universität Köln, Germany (FRG), 19.06.1985.
 - 26) Institute of Organic Synthesis, Latvian SSR Academy of Sciences, Riga, USSR, 23.09.1985.
 - 27) 8èmes Journées Scientifiques Rhône-Poulenc, Deauville, France, 02.10.1985.
 - 28) Centre de Recherches Agrochimie de la Dargoire (Rhône-Poulenc Agrochimie), Lyon, France, 03.10.1985.
 - 29) Gesellschaft Deutscher Chemiker, Marl, Germany (FRG), 13.11.1985.
 - 30) Institut für Chemie der Universität Hohenheim, Germany (FRG), 14.11.1985.
 - 31) Fachbereich Chemie der Universität Kaiserslautern, Germany (FRG), 15.11.1985.
 - 32) Gesellschaft Deutscher Chemiker, Leverkusen, Germany (FRG), 13.02.1986.
 - 33) BASF AG, Ludwigshafen, Germany (FRG), 18.02.1986.
 - 34) 15th GDR-Poland Colloquy on Organometallic Chemistry, Bad Stuer, Germany (GDR), 25.04.1986.
 - 35) Gesellschaft für Biotechnologische Forschung (GBF), Braunschweig-Stöckheim, Germany (FRG), 06.05.1986.
 - 36) Institut für Anorganische Chemie der Universität Göttingen, Germany (FRG), 10.06.1986.
 - 37) Institut für Anorganische Chemie der Universität Stuttgart/Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany (FRG), 02.07.1986.
 - 38) American Chemical Society, 192nd National Meeting, Anaheim, USA, 12.09.1986.
 - 39) Institut für Anorganische Chemie der Universität Karlsruhe, Germany (FRG), 14.10.1986.
 - 40) Fachbereich Chemie der Universität Dortmund, Germany (FRG), 17.10.1986.
 - 41) Institut für Anorganische und Analytische Chemie der Technischen Universität Berlin, Germany (FRG), 20.10.1986.
 - 42) Gesellschaft Deutscher Chemiker, Paderborn, Germany (FRG), 26.01.1987.
 - 43) Fakultät für Chemie der Universität Bielefeld, Germany (FRG), 04.02.1987.

- 44) Fachbereich Chemie der Universität Marburg, Germany (FRG), 22.06.1987.
- 45) Institute of Inorganic Chemistry and Technology, Technical University of Gdansk, Poland, 27.10.1987.
- 46) Centre of Molecular and Macromolecular Studies of the Polish Academy of Sciences, Lodz, Poland, 28.10.1987.
- 47) Institut für Anorganische Chemie der Universität Frankfurt/Main, Germany (FRG), 16.11.1987.
- 48) Institut für Anorganische Chemie der Universität des Saarlandes, Saarbrücken, Germany (FRG), 24.11.1987.
- 49) Anorganisch-chemisches Institut der Technischen Universität München, Germany (FRG), 29.01.1988.
- 50) Fakultät für Chemie der Universität Konstanz, Germany (FRG), 08.02.1988.
- 51) Ciba-Geigy AG, Basel, Switzerland, 10.02.1988.
- 52) Sektion Chemie der Wilhelm-Pieck-Universität Rostock, Rostock, Germany (GDR), 21.04.1988.
- 53) Zentralinstitut für Organische Chemie der Akademie der Wissenschaften der DDR, Berlin, Germany (GDR), 25.04.1988.
- 54) Sektion Chemie der Martin-Luther-Universität Halle-Wittenberg, Halle (Saale), Germany (GDR), 27.04.1988.
- 55) Sektion Chemie der Technischen Universität Dresden, Dresden, Germany (GDR), 28.04.1988.
- 56) Chemische Institute der Universität Heidelberg, Germany (FRG), 09.05.1988.
- 57) Byk Gulden Lomberg Chemische Fabrik GmbH, Konstanz, Germany (FRG), 16.05.1988.
- 58) 6. Vortragstagung/ORCHEM'88 (Gesellschaft Deutscher Chemiker, Arbeitsgemeinschaft Organische Chemie), Bad Nauheim, Germany (FRG), 23.09.1988.
- 59) Wacker-Chemie GmbH, Burghausen, Germany (FRG), 28.09.1988.
- 60) Gesellschaft Österreichischer Chemiker, Graz, Austria, 31.05.1989.
- 61) Gordon Research Conferences, Medicinal Chemistry, New London, USA, 03.08.1989.
- 62) Dow Corning Corporation, Midland, USA, 10.08.1989.
- 63) EUCHEM Königstein Conference III, New Perspectives in Organometallic Chemistry, Königstein/Taunus, Germany (FRG), 26.09.1989.

- 64) Chemische Gesellschaft der DDR, 18. Tagung der Arbeitsgruppe "Elementorganische Chemie", Koserow, Germany (GDR), 02.10.1989.
- 65) Gesellschaft Österreichischer Chemiker, Innsbruck, Austria, 30.10.1989.
- 66) Sektion Chemie der Technischen Universität Dresden, Dresden, Germany (GDR), 08.11.1989.
- 67) Institut für Anorganische Chemie der Universität Würzburg, Germany (FRG), 27.11.1989.
- 68) Institut für Anorganische Chemie der Technischen Hochschule Aachen, Germany (FRG), 20.04.1990.
- 69) Department of Pharmacochemistry, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands, 02.05.1990.
- 70) Department of Inorganic Chemistry, Katholieke Universiteit Nijmegen, Nijmegen, The Netherlands, 03.05.1990.
- 71) F. Hoffmann-La Roche AG, Basel, Switzerland, 07.05.1990.
- 72) IXth International Symposium on Organosilicon Chemistry, Edinburgh, UK, 19.07.1990.
- 73) Merrell Dow Research Institute, Strasbourg, France, 03.10.1990.
- 74) 40 Jahre Fonds der Chemischen Industrie, Vortragsveranstaltung, Hamburg, Germany, 19.10.1990.
- 75) Symposium "Fortschritte in der Arzneimittelforschung: Pharmakodynamische, pharmakokinetische und molekularbiologische Untersuchungen", Frankfurt/Main, Germany, 06.06.1991.
- 76) Fachbereich Chemie der Universität Hamburg, Germany, 24.06.1991.
- 77) XXV Silicon Symposium, Los Angeles, USA, 04.04.1992.
- 78) Gesellschaft Deutscher Chemiker, Berlin, Germany, 25.05.1992.
- 79) Anorganisch-Chemisches Institut der Universität Heidelberg, Germany, 30.06.1992.
- 80) Department of Pharmacochemistry, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands, 20.11.1992.
- 81) Institut für Anorganische Chemie der Universität Würzburg, Germany, 15.02.1993.
- 82) Dow Corning Corporation, Midland, USA, 24.03.1993.
- 83) Gesellschaft Deutscher Chemiker, Braunschweig, Germany, 19.04.1993.
- 84) Xth International Symposium on Organosilicon Chemistry, Poznan, Poland, 19.08.1993.
- 85) Regionale Lehrerfortbildung, Regierungsbezirk Braunschweig, Hankensbüttel,

- Germany, 27.08.1993.
- 86) Degussa, Hanau, Germany, 09.12.1993.
 - 87) Merck, Darmstadt, Germany, 09.02.1994.
 - 88) 2. Münchner Silicontage, München, Germany, 01.08.1994.
 - 89) Institut für Anorganische Chemie der Universität Köln, Germany, 09.11.1994.
 - 90) Institut für Chemie der Humboldt-Universität zu Berlin, Germany, 29.11.1994.
 - 91) Tailor-Made Silicon-Oxygen Compounds - From Molecules to Materials, Bielefeld, Germany, 03.09.1995
 - 92) Dow Corning Corporation, Midland, USA, 24.10.1995.
 - 93) Dow Corning Corporation, Midland, USA, 25.10.1995.
 - 94) Dow Corning Corporation, Midland, USA, 26.10.1995.
 - 95) Dow Corning Corporation, Barry, UK, 18.01.1996.
 - 96) Dow Corning Workshop on the Biochemistry and Molecular Biology of Silicon, LaJolla, USA, 07.05.1996.
 - 97) XX. Colloquy on Organometallic Chemistry Germany-Poland, Bad Kösen, Germany, 12.09.1996.
 - 98) Fachbereich Chemie der Bergischen Universität — Gesamthochschule Wuppertal, Germany, 12.12.1996.
 - 99) Gesellschaft Deutscher Chemiker, Mülheim, Germany, 06.03.1997.
 - 100) 80th Canadian Society for Chemistry Conference and Exhibition, Windsor, Canada, 03.06.1997.
 - 101) Dow Corning Corporation, Midland, USA, 05.06.1997.
 - 102) Gesellschaft Deutscher Chemiker, Dortmund, Germany, 22.06.1998.
 - 103) Gesellschaft Deutscher Chemiker, Erlangen, Germany, 25.06.1998.
 - 104) IXth International Conference on the Coordination and Organometallic Chemistry of Germanium, Tin and Lead, Melbourne, Australia, 25.09.1998.
 - 105) Institut für Anorganische Chemie der Universität München, Germany, 11.02.1999.
 - 106) XIIth International Symposium on Organosilicon Chemistry, Sendai, Japan, 25.05.1999.
 - 107) XIIth International Symposium on Organosilicon Chemistry – Post-Symposium in Kyoto, Kyoto, Japan, 29.05.1999.
 - 108) Gesellschaft Deutscher Chemiker, Bayreuth, Germany, 11.11.1999.
 - 109) Gesellschaft Deutscher Chemiker, Berlin, Germany, 29.11.1999.

- 110) Schering AG, Berlin, Germany, 30.11.1999.
- 111) 9. Diskussionstagung „Anorganisch-Technische Chemie“ (DECHEMA), Frankfurt/Main, Germany, 23.03.2000.
- 112) Gesellschaft Deutscher Chemiker, Freiberg/Sachsen, Germany, 26.04.2000.
- 113) Institut für Anorganische Chemie der Universität Wien, Austria, 05.05.2000.
- 114) Gesellschaft Deutscher Chemiker, Greifswald, Germany, 22.06.2000.
- 115) 25. Clemens-Winkler-Vorlesung, Freiberg/Sachsen, Germany, 25.10.2001.
- 116) Institut für Anorganische und Analytische Chemie, TU Braunschweig, Germany, 13.12.2001.
- 117) AstraZeneca, Mölndal, Sweden, 20.03.2002.
- 118) Gesellschaft Deutscher Chemiker, Hamburg, Germany, 16.05.2002.
- 119) Gesellschaft Deutscher Chemiker, Rostock, Germany, 06.06.2002.
- 120) Gesellschaft Deutscher Chemiker, Clausthal-Zellerfeld, Germany, 28.06.2002.
- 121) Institut für Anorganische Chemie der Universität Zürich, Switzerland, 25.04.2003.
- 122) Institut für Anorganische Chemie der TU München, Germany, 30.06.2003.
- 123) EUROMAT 2003, Lausanne, Switzerland, 03.09.2003.
- 124) Dow Corning Corporation, Midland, USA, 05.09.2003.
- 125) Laboratoire de Chimie Organique et Organométallique (LCOO), Université Bordeaux 1, France, 23.09.2003.
- 126) Laboratoire de Chimie Organique et Organométallique (LCOO), Université Bordeaux 1, France, 25.09.2003.
- 127) Laboratoire de Chimie de Coordination du CNRS (LCC)/Laboratoire Hétérochimie Fondamentale et Appliquée du CNRS, Université Paul Sabatier, Toulouse, France, 30.09.2003.
- 128) Laboratoire de Chimie Moléculaire et Organisation du Solide, Université de Montpellier II, Montpellier, France, 02.10.2003.
- 129) All-Polish Symposium of Organosilicon Compounds, Dymaczewo, Poland, 15.10.2003.
- 130) Anorganisch-Chemisches Kolloquium, Department Chemie der Universität München, Germany, 04.12.2003.
- 131) 37th Silicon Symposium, Philadelphia, USA, 20.05.2004.
- 132) RWTH Aachen, Germany, 02.12.2004
- 133) Seminar, Saitama University, Japan, 25.10.2005.????

- 134) 9th Symposium of the Japanese Society of Silicon Chemistry, Tokyo University of Science, Japan, 28.10.2004.
- 135) Gesellschaft Deutscher Chemiker, Münster, Germany, 15.11.2004.
- 136) Inorganic Polymer Symposium, Tokyo University of Science, Japan, 05.11.2005.
- 137) Universität zu Köln, Germany, 11.05.2005.
- 138) Berner Chemische Gesellschaft, University of Berne, Department of Chemistry and Biochemistry, Switzerland, 25.05.2005.
- 139) Dow Corning Corporation, Midland, USA, 06.06.2005.
- 140) Universität Chemnitz, Germany, 13.10.2005.
- 141) Pacificchem 2005, Honolulu, USA, 17.12.2005.
- 142) Universität Bremen, Germany, 21.05.2007.
- 143) 40th Silicon Symposium, Victoria, Canada, 02.06.2007.
- 144) ICBIC XIII – 13th International Conference on Biological Inorganic Chemistry, Vienna, Austria, 19.07.2007.
- 145) 4th European Silicon Days, Bath, UK, 10.09.2007.
- 146) Flavours & Fragrances London, UK, 24.09.2007.
- 147) 41th Silicon Symposium, San Francisco, USA, 25.04.2008.
- 148) ISOS XV – The 15th International Symposium on Organosilicon Chemistry, Jeju Island, Korea, 03.06.2008.
- 149) Imperial College, London, UK, 11.11.2008.
- 150) Silicon by the Sea, 3rd Workshop on the Aqueous Chemistry and Biochemistry of Silicon, San Diego, USA, XX?.12.2009