

Publikationen

Claudia Schmidt, Department Chemie, Universität Paderborn

Gelled lyotropic liquid crystals

Yang Xu, Michaela Laupheimer, Natalie Preisig, Thomas Sottmann, Claudia Schmidt, and Cosima Stubenrauch

[Langmuir 2015, 31, 8589–8598.](#)

Colloidal gels formed by dilute aqueous dispersions of surfactant and fatty alcohol

F. Grewe, J. Ortmeier, R. Haase, and C. Schmidt

in: [Colloid Process Engineering](#), ed. by M. Kind, W. Peukert, H. Rehage, and H. Schuchmann, pp. 21-44, Springer, 2015.

Rheo-nuclear magnetic resonance spectroscopy: a versatile toolbox to investigate rheological phenomena in complex fluids

C. Schmidt

[Spectroscopy Europe 2014, 26\(6\), 11–14.](#)

Embedding DNA in surfactant mesophases: The phase diagram of the ternary system dodecyltrimethylammonium–DNA/monoolein/water in comparison to the DNA-free analogue

A. Bilalov, J. Elsing, E. Haas, C. Schmidt and U. Olsson

[J. Colloid Interface Sci. 2013, 394, 360–367.](#)

Self-assembled nanoparticles of modified chitosan conjugates for the sustained release of DL-alpha-tocopherol

J. Perez Quinones, K. V. Gothelf, J. Kjems, Ch. Yang, A. M. Heras Caballero, C. Schmidt and C. Peniche Covas

[Carbohydrate Polymers 2013, 92, 856–864.](#)

Novel self-assembled nanoparticles of testosterone-modified glycol chitosan and fructose chitosan for controlled release

J. Perez Quinones, K. V. Gothelf, J. Kjems, A. Heras, C. Schmidt and C. Peniche

[Journal of Biomaterials and Tissue Engineering 2013, 3, 164–172.](#)

N,O6-partially acetylated chitosan nanoparticles hydrophobically-modified for controlled release of steroids and vitamin E

J. Perez Quinones, K. V. Gothelf, J. Kjems, A. M. Heras Caballero, C. Schmidt, and C. Peniche Covas

[Carbohydrate Polymers 2013, 91, 143–151.](#)

Transient and Steady-State Shear Banding in a Lamellar Phase as Studied by Rheo-NMR

B. Medronho, U. Olsson, C. Schmidt, and P. Galvosas

[Zeitschr. f. Physikal. Chemie 2012, 226, 1293–1314.](#)

Structural Evolution in the Isotropic Channel of a Water–Nonionic Surfactant System That Has a Disconnected Lamellar Phase: A ¹H NMR Self-Diffusion Study

C. Stubenrauch, F. Kleinschmidt, and C. Schmidt

[Langmuir 2012, 28, 9206–9210.](#)

Kinetics of the Grating Formation in Holographic Polymer-Dispersed Liquid Crystals: NMR Measurement of Diffusion Coefficients

M. Tang, A. Redler, D. Topgaard, C. Schmidt, and H.-S. Kitzerow

[Colloid Polym. Sci. 2012, 290, 751–755.](#)

Self-Assembled Nanoparticles of Glycol Chitosan-Ergocalciferol Succinate Conjugate for Controlled Release

J. Perez-Quinones, K. V. Gothelf, J. Kjems, A. M. H. Caballero, C. Schmidt and C. Peniche Covas

[Carbohydrate Polymers 2012, 88, 1373–1377.](#)

Molecular Recognition with 2,4-Diaminotriazine-Functionalized Colloids

F. M. Bayer, M. Tang, R. Michels, C. Schmidt and K. Huber

[Langmuir 2011, 27, 12851–12858](#)

Effect of shear on vesicle and lamellar phases of DDAB/lecithin ternary systems

M. Youssry, L Coppola, I. Nicotera and C. Schmidt

[J. Coll. Interface Sci. 2011, 358, 506–512](#)

Novel drug delivery systems: Chitosan conjugates covalently attached to steroids with potential anticancer and agrochemical activity

J. Perez Quinones, R. Szopko, C. Schmidt and C. Peniche Covas

[Carbohydrate Polymers 2011, 84, 858–864](#)

Planar lamellae and onions: a spatially resolved rheo-NMR approach to the shear-induced structural transformations in a surfactant model system

B. Medronho, J. Brown, M. G. Miguel, C. Schmidt, U. Olsson and P. Galvosas

[Soft Matter 2011, 7, 4938–4947](#)

Homogeneous length scale of shear-induced multilamellar vesicles studied by diffusion NMR

I. Aslund, B. Medronho, D. Topgaard, O. Söderman and C. Schmidt

[J. Magn. Reson. 2011, 209, 291–299](#)

Shear-Induced Defect Formation in a Nonionic Lamellar Phase

B. Medronho, M. Rodrigues, M. G. Miguel, U. Olsson and C. Schmidt

[Langmuir 2010, 26, 11304–11313](#)

Size Determination of Shear-Induced Multilamellar Vesicles by Rheo-NMR Spectroscopy

B. Medronho, C. Schmidt, U. Olsson and M. G. Miguel

[Langmuir 2010, 26, 1477–1481](#)

Shear-Induced Transitions between a Planar Lamellar Phase and Multilamellar Vesicles: Continuous versus Discontinuous Transformation

B. Medronho, S. Shafaei, R. Szopko, M. G. Miguel, U. Olsson, and C. Schmidt Langmuir 2008, 24, 6480–6486

Manifestation of Berry's Phase in NQR Spectra of Rotating Powder Samples

N. Sinyavsky, M. Maćkowiak, and C. Schmidt
Z. Naturf. 2008, 63A, 81–87

Director Orientation of Nematic Side-Chain Liquid Crystalline Polymers Shear Flow: Comparison of a Flow-Aligning and a Non-Flow-Aligning Polysiloxane

H. Siebert, I. Quijada-Garrido, J. Vermant, L. Noirez, W. R. Burghardt, C. Schmidt
Macromol. Chem. Phys. 2007, 208, 2173–2188

Coexisting Lamellar Phases in Water-Oil-Surfactant Systems Induced by the Addition of an Amphiphilic Block Copolymer

Ch. Frank, R. Strey, C. Schmidt, and C. Stubenrauch
J. Coll. Interface Sci. 2007, 312, 76–86

Rheo-NMR Spectroscopy

C. Schmidt

in "Modern Magnetic Resonance, Part 3, Applications in Materials, Food and Marine Sciences", pp. 1495–1501, ed. by G. A. Webb, Springer, New York 2006.

Lyotropic Lamellar Polysiloxanes with Isomeric Amphiphilic Side Chains

D. Burgemeister, T. Farrell, and C. Schmidt
Macromol. Chem. Phys. 2006, 207, 396–403

Lamellar Liquid Single Crystal Hydrogel: Synthesis and Investigation of Anisotropic Water Diffusion and Swelling

F. Kleinschmidt, M. Hickl, K. Saalwächter, C. Schmidt and H. Finkelmann, Macromolecules 2005, 38, 9772–9782

Shear-Induced Order in Nematic Polymers

P. Becker, H. Siebert, L. Noirez, and C. Schmidt
Macromol. Symp. 2005, 220, 111–122

(Proceedings of the 22nd IUPAC International Discussion Conference "Spectroscopy of Partially Ordered Macromolecular Systems", July 21–24, 2003, Prague)

Director Reorientation of a Side-Chain Liquid Crystalline Polymer under Extensional Flow

R. J. Cormier, C. Schmidt, and P. T. Callaghan
J. Rheol. 2004, 48, 881–894

A New Approach to Lamellar Phases (L_{α}) in Water-Nonionic Surfactant Systems

C. Stubenrauch, S. Burauer, R. Strey, and C. Schmidt
Liquid Crystals 2004, 31, 39–53.

Deuterium NMR Study of Slow Relaxation Dynamics in a Polymer-Like Micelles System after Flow-Induced Orientation

R. Angelico, D. Burgemeister, A. Ceglie, U. Olsson, G. Palazzo, and C. Schmidt, J. Phys. Chem. B 2003, 107, 10325-10328.

Phase Behavior of n-Alkylsubstituted Polysilanes

C. Mueller, C. Peter, H. Frey, and C. Schmidt,
in: *Silicon Chemistry: From the Atom to Extended Systems*, ed. by P. Jutzi, U. Schubert, Wiley-VCh, Weinheim 2003.

In situ Deuteron NMR Investigations of Sheared Liquid Crystalline Polymers

H. Siebert, P. Becker, I. Quijada-Garrido, D. A. Grabowski, and C. Schmidt
Solid State Nucl. Magn. Reson. 2002, 22, 311-326.

Solitons and Production of Defects in Flow-Aligning Nematic Liquid Crystals under Simple Shear Flow

Y. Yang, K. Luo, C. Schmidt, and C. Peter
Progress in Natural Science 2002, 12, 188-197.

Shear Flow of Lamellar Polymer Surfactants

D. Burgemeister and C. Schmidt
Progress Coll. Polym. Sci 2002, 121, 95-100.

Evaluation of the Viscoelastic Properties of a Nematic Dimer by Cone-and-Plate Rheo-NMR Spectroscopy and Comparison with Leslie-Ericksen Theory

M. Lukaschek, G. Kothe, C. Schmidt, A. E. Gomes und A. Polimeno
J. Chem. Phys. 2002, 117, 4550-4556.

Lyotropic Mesophases Next to Highly Efficient Microemulsions: A ^2H NMR Study

C. Stubenrauch, C. Frank, R. Strey, D. Burgemeister, and C. Schmidt
Langmuir 2002, 18, 5027-5030.

Phase Structure and Flow Properties of Liquid Crystal Side Chain Polymers

P. Becker, C. Schmidt, and L. Noirez
Polymeric Materials: Science and Engineering 2001, 84, 568-569.

Rheology and NMR Measurements under Shear of Sodium Dodecyl Sulfate/Decanol/Water Nematics

T. Thiele, J.-F. Berret, S. Müller, and C. Schmidt
[J. Rheol. 2001, 45\(1\), 29-48.](#)

Flow Behavior of Two Side-Chain Liquid Crystal Polymers Studied by Transient Rheology

I. Quijada-Garrido, H. Siebert, C. Friedrich, and C. Schmidt
[Macromolecules 2000, 33\(10\), 3844-3854.](#)

Rheo-optical Investigations of Lyotropic Mesophases of Polymeric Surfactants

G. Schmidt, S. Müller, C. Schmidt, and W. Richtering

[Rheologica Acta 1999, 38, 486-494.](#)

Transient Rheological Behavior of Tumbling Side-Chain Liquid Crystal Polymers and Determination of Their lambda Parameters

I. Quijada-Garrido, H. Siebert, P. Becker, C. Friedrich, and C. Schmidt

[Rheologica Acta 1999, 38, 495-502.](#)

Shear-Induced States of Orientation of the Lamellar Phase of C12E4/Water

S. Müller, C. Boerschig, W. Gronski, C. Schmidt, and D. Roux

[Langmuir 1999, 15, 7558-7546.](#)

Polymorphism and Molecular Mobility of Polysilanes and Poly(silylenemethylene)s

C. Mueller, C. Schmidt, F. Koopmann, and H. Frey

in: *Organosilicon Chemistry IV – From Molecules to Materials* (Eds. N. Auner, J. Weis), Wiley-VCH, Weinheim, 2000, pp. 558-562.

Determination of Orientational Distributions from ²H NMR Data by a Regularization Method

J. Winterhalter, D. Maier, D. A. Grabowski, J. Honerkamp, S. Müller, C. Schmidt

[J. Chem. Phys 1999, 110, 4035-4046.](#)

Phase Behaviour of Poly(di-n-decylsilane)

C. Mueller, H. Frey, and C. Schmidt

Monatshefte f. Chemie 1999, 130, 175–180.

Magnetic Resonance

C. Schmidt and H. W. Spiess

in: *Handbook of Liquid Crystals, Vol. 1*, Wiley-VCH Verlag, Weinheim 1998, pp. 595–618.

Shear Orientation of Lyotropic Hexagonal Phases

G. Schmidt, S. Müller, P. Lindner, C. Schmidt, and W. Richtering

[J. Phys. Chem B 1998, 102, 507-513.](#)

Rheo-NMR Study of a Non-Flow-Aligning Side-Chain Liquid Crystal Polymer in Nematic Solution

H. Siebert, D. A. Grabowski, and C. Schmidt

Rheol. Acta 1997, 36, 618–627.

Solid-like Director Reorientation in Sheared Hexagonal Lyotropic Liquid Crystals as Studied by Nuclear Magnetic Resonance

S. Müller, P. Fischer, and C. Schmidt

[J. Physique II France 1997, 7, 421-432.](#)

Liquid Single Crystal Elastomers

H. Finkelmann, S. Disch, and C. Schmidt,

in: *Polymeric Materials Encyclopedia* 1996, Vol. 5, p. 3794–3081.

Solid-State-NMR Investigation of C1-Deuterated Poly(di-n-hexylsilylene)

C. Mueller, H. Frey, and C. Schmidt

[Macromolecules 1996, 29, 3320–3322.](#)

Lamellar Lyomesophases under Shear as Studied by Deuterium Nuclear Magnetic Resonance

M. Lukaschek, S. Müller, A. Hasenhindl, D. A. Grabowski, and C. Schmidt

Colloid Polym. Sci. 1996, 274, 1–7.

Shear-Induced Alignment of a Hexagonal Lyotropic Liquid Crystal as Studied by Rheo-NMR

M. Lukaschek, D. A. Grabowski, and C. Schmidt

Langmuir 1995, 11, 3590–3594.

Amphiphilic Liquid-Crystalline Networks - Phase behaviour and alignment by mechanical fields

P. Fischer, C. Schmidt, and H. Finkelmann

Macromol. Rapid Commun. 1995, 16, 435–447.

Orientation and Motion of Tetrahydrofuran in Graphite Intercalation Compounds: Proton NMR studies of Cs(THF)1.3C24 and K(THF)2.5C24

C. Schmidt, M. E. Rosen, D. F. Caplan, A. Pines, and M.-F. Quinton

J. Phys. Chem. 1995, 99, 10565–10572.

Nematic Elastomers beyond the Critical Point

S. Disch, C. Schmidt, and H. Finkelmann

Macromol. Rapid Commun. 1994, 15, 303–310.

Simultaneous Measurement of Shear Viscosity and Director Orientation of a Side-Chain Liquid-Crystalline Polymer by Rheo-NMR

D. A. Grabowski and C. Schmidt

Macromolecules 1994, 27, 2632–2634.

A Doubly Branched Nonionic Oligooxyethylene V Amphiphile: Effect of Molecular Geometry on Liquid-Crystalline Phase Behavior. 3.

K. Kratzat, C. Schmidt und H. Finkelmann

J. Coll. Interface Sci. 1994, 163, 190–198.

Deuteron NMR Study on the Lyomesophases of Nonionic Surfactants: Quadrupole Splittings of Hexaethylene Glycol Dodecyl Methyl Ether

W. Schnepf, C. Schmidt und H. Finkelmann

Prog. Colloid Polym. Sci. 1993, 93, 354–355.

Conformational Order of Amphiphilic Chain Molecules in Lyotropic Liquid-Crystalline Phases

W. Schnepf und C. Schmidt

Ber. Bunsenges. Phys. Chem. 1994, 98, 248–252.

^2H NMR Study on the Lyomesophases of the System Hexaethylene Glycol Dodecyl Methyl Ether/Water: Temperature Dependence of Quadrupole Splittings

W. Schnepf, S. Disch und C. Schmidt

Liq. Cryst. 1993, 14, 843–852.

Two-Dimensional Proton NMR Studies of the Conformations and Orientations of *n*-Alkanes in a Liquid Crystal Solvent

M. E. Rosen, S. P. Rucker, C. Schmidt und A. Pines

J. Phys. Chem. 1993, 97, 3858–3866.

Two-Dimensional NMR Studies of Flexible Molecules in Liquid Crystals: Orientational Order and Conformational Probabilities of *n*-Hexane

M. Gochin, A. Pines, M. E. Rosen, S. P. Rucker und C. Schmidt

Mol. Phys. 1990, 69, 671–695.

Magnetic-Field-Induced Orientation of Crystallites in Powders of Intercalation Compounds Detected by NMR

T. K. Halstead, C. Schmidt, H. W. Spiess, R. Schöllhorn, W. Müller-Warmuth und H. Möller

J. Phys. Chem. 1988, 92, 7167–7168.

Deuteron Two-Dimensional Exchange NMR in Solids

C. Schmidt, B. Blümich und H. W. Spiess

J. Magn. Reson. 1988, 79, 269–290.

Molecular Motions from Two-Dimensional NMR of Powders: Comparison of Rotational Jumps and Diffusive Reorientations

C. Schmidt, B. Blümich, S. Wefing, S. Kaufmann und H. W. Spiess

Ber. Bunsenges. Phys. Chem. 1987, 91, 1141 - 1145.

Dynamics of Molecular Reorientations: Direct Determination of Rotational Angles from Two-Dimensional NMR of Powders

C. Schmidt, S. Wefing, B. Blümich und H. W. Spiess

Chem. Phys. Lett. 1986, 130, 84–90.

Distribution of Correlation Times in Glassy Polymers from Pulsed Deuteron NMR

C. Schmidt, K. J. Kuhn und H. W. Spiess

Progr. Coll. Polym. Sci. 1985, 71, 71–76.