

- Alber, U., H. Müllejans, and M. Rühle, "Bismuth segregation at copper grain boundaries," *Acta Mater.*, Vol. 47, pg. 4047 (1999)
- Alber, U., H. Müllejans, and M. Rühle, "Wetting of copper on α -Al₂O₃ surfaces depending on the orientation and oxygen partial pressure," *Micron*, Vol. 30, pg. 101 (1999)
- Alcantar, N.A., E.S. Aydil, and J.N. Israelachvili, "A simple, efficient and flexible method to create smooth PEG-coated biocompatible surfaces," *J. Biomed. Mater. Res.*, in press (1999)
- Alcantar, N.A., E.S. Aydil, and J.N. Israelachvili, "Effect of water plasma on silica surfaces: Synthesis, characterization and application," *Proc. 7th Intl. Symp. on Chemically Modified Surfaces, Royal Society of Chemistry*, Cambridge, UK, in press (1999)
- Almqvist, N., N.H. Thomson, B.L. Smith, G.D. Stucky, D.E. Morse, and P.K. Hansma, "Methods for fabricating and characterizing a new generation of biomimetic materials," *Mater. Sci. Eng. C*, Vol. 7, pg. 34 (1999)
- Aranda-Espinoza, H., Y. Chen, N. Dan, T. C. Lubensky, P. Helson, L. Ramos and D. A. Weitz, "Electrostatic repulsion of positively charged vesicles and negatively charged objects", *Science*, Vol. 285, pg. 394 (1999)
- Ayyappan, S., G. Díaz de Delgado, A.K. Cheetham, G. Férey, and C.N.R. Rao, "Synthesis and characterization of a three-dimensional open-framework lead(II) carboxyethylphosphonate, Pb₃(O₂CCH₂CH₂PO₃)₂," *J. Chem. Soc., Dalton Transactions*, pg. 2905 (1999)
- Cha, J.N., K. Shimizu, Y. Zhou, S.C. Christiansen, B.F. Chmelka, G.D. Stucky, and D.E. Morse, "Silicatein filaments and subunits from a marine sponge direct the polymerization of silica and silicones in vitro," *Proc. Natl. Acad. Sci. USA*, Vol. 96, pg. 361 (1999)
- Chang, Y., K. Lee, R. Kiebooms, A. Aleshin, and A.J. Heeger, "Reflectance of conducting PEDOT," *Synth Met.*, Vol. 105, pg. 203 (1999)
- Cheng, J. and T. J. Deming, "Screening of optically active nickel initiators for enantioasymmetric polymerization of *g*-benzyl glutamate-N-carboxyanhydride", *Macromolecules*, Vol. 32, pg. 4745 (1999)
- Chien, A.T., J. Sachleben, J.H. Kim, J.S. Speck, and F.F. Lange, "Synthesis and characterization of PbTiO₃ powders and heteroepitaxial thin films by hydrothermal synthesis," *J. Mat. Res.*, Vol. 14, pg. 3303 (1999)
- Chien, A.T., X. Xu, J.H. Kim, J. Sachleben, J.S. Speck, and F.F. Lange, "Electrical characterization of BaTiO₃ heteroepitaxial thin films by hydrothermal synthesis," *J. Mat. Res.*, Vol. 14, pg. 3330 (1999)
- Curtin, S. A. and T. J. Deming, "Initiators for end-group functionalized polypeptides via tandem addition reactions", *J. Amer. Chem. Soc.*, Vol. 121, pg. 7427 (1999)
- Deming, T. J., "Cobalt and iron initiators for the controlled polymerization of α -Amino acid-N-carboxyanhydrides", *Macromolecules*, Vol. 32, pg. 4500 (1999)
- Eckert, J., G.D. Stucky, and A.K. Cheetham, "Partially disordered inorganic materials," *MRS Bulletin*, Vol. 24, pg. 31 (1999)
- Gédéon, A., D.E. Favre, D. Reichert, J. MacNeil, and B.F. Chmelka, "Distributions of site-hopping geometries and rates for benzene adsorbed on Ag-Y zeolite," *J. Phys. Chem. A*, Vol. 103, pg. 6691 (1999)

Golan, Y., C. Drummond, M. Homyonfer, Y. Feldman, R. Tenne, and J. Israelachvili, "Microtribology and direct force measurement of WS₂ nested Fullerene-like nanostructures," *Adv. Mater.*, Vol. 11, pg. 934 (1999)

Goodwin, A. A., X. Bu, and T. J. Deming, "Reactions of α -amino acid-N-carboxyanhydrides (NCAs) with organometallic palladium(0) and platinum(0) compounds: structure of a metallated NCA product and its role in polypeptide synthesis", *J. Organometallic Chemistry*, Vol. 589, pg. 111 (1999)

Han, Y., G.D. Stucky, and A. Butler, "Mesoporous silicate sequestration and release of proteins," *J. Am. Chem. Soc.*, Vol. 121, pg. 9897 (1999)

Heier, J., J. Genzer, E.J. Kramer, F.S. Bates, S. Walheim, and G. Krausch, "Transfer of a chemical substrate pattern into an island-forming diblock copolymer film," *J. Chem. Phys.*, Vol. 111, pg. 11101 (1999)

Heier, J., E. Sivaniah, and E.J. Kramer, "Anisotropic coarsening of two-dimensional surface domains in copolymer thin films," *Macromolecules*, Vol. 32, pg. 9007 (1999)

Hernandez-Contreras, M., M.W. Kim, and P. Pincus, "Surface hydrodynamics on a freely standing layer of a polymer solution," *Phys. Rev. E*, Vol. 60, pg. 4319 (1999)

Israelachvili, J., "Long- and short-range forces between hydrophilic surfaces and biopolymers in aqueous solutions," *Proceedings of X International Conference on Hydrocolloids (Plenary lecture)*, Osaka, Japan, October 1998, in press (1999)

Janicke, M.T., C.C. Landry, S.C. Christiansen, S. Birtalan, G.D. Stucky, and B.F. Chmelka, "Low silica MCM-41 composites and mesoporous solids," *Chem of Mtls.*, Vol. 11, pg. 1342 (1999)

Jiao, J., E.J. Kramer, S. de Vos, M. Möller, and C. Koning, "Morphological changes of a molten polymer/polymer interface driven by grafting," *Macromolecules*, Vol. 32, pg. 6261 (1999)

Kim, J.H., A.T. Chien, F.F. Lange, and L. Wills, "Microstructure and ferroelectric properties of a chemical solution deposited epitaxial PZr_{0.5}Ti_{0.5}O₃ thin film on a SrRuO₃/SrTiO₃ substrate," *J. Mat. Res.*, Vol. 14, pg. 1190 (1999)

Kim, J.H. and F.F. Lange, "Epitaxial growth of PbZr_{0.5}Ti_{0.5} thin films on (001)LaAlO₃ by the chemical solution deposition method," *J. Mat. Res.*, Vol. 14, pg. 4004 (1999)

Kim, J.H. and F.F. Lange, "Seeded epitaxial growth of PbTiO₃ thin films on (001) LaAlO₃ using the chemical solution deposition method," *J. Mat. Res.*, Vol. 14, pg.1626 (1999)

Kim, J.H., F.F. Lange, and C. Cheon, "Epitaxial growth of patterned SrBi₂Ta₂O₉ lines by channel stamping," *J. Mat. Res.*, Vol. 14, pg. 1194 (1999)

Koltover, I., J.O. Rädler, and C.R. Safinya, "Membrane mediated attraction and ordered aggregation of colloidal particles bound to giant phospholipid vesicles," *Phys. Rev. Lett.*, Vol. 82, pg. 1991 (1999)

Koltover, I., J.O. Rädler, T. Salditt, K. Rothschild, and C.R. Safinya, "Phase behavior and interactions of the membrane-protein bacteriorhodopsin," *Phys. Rev. Lett.*, Vol. 82, pg. 3184 (1999)

Koltover, I., T. Salditt, and C.R. Safinya, "Phase diagram, stability and overcharging of lamellar cationic lipid - DNA self assembled complexes," *Biophysical J.*, Vol. 77, pg. 915 (1999)

Kuhl, T.L., J. Majewski, P. Howes, K. Kjaer, B. Ocko, J.N. Israelachvili, and G.S. Smith, "Study of packing stress relaxation in polymer-lipid monolayers at the air-water interface by x-ray grazing incidence diffraction and reflectivity," *J. of Amer. Chem. Soc.*, Vol. 121, pg. 7682 (1999)

Langjahr, P.A., T. Wagner, M. Rühle, and F.F. Lange, "Thermal induced structural changes in epitaxial SrZrO₃-films on SrTiO₃," *J. Mat. Res.*, Vol. 14, pg. 2945 (1999)

Lattuner, S.E., J. Sachleben, B.B. Iversen, J. Hanson, and G.D. Stucky, "Covalent guest-framework interactions in heavy metal sodalites: Structure and properties of thallium and silver sodalite," *J. Phys. Chem. B.*, Vol. 103, pg. 7135 (1999)

Lau, A. and P. Pincus, "Binding of oppositely charged membranes and membrane reorganization," *Eur. Phys. J. B*, Vol. 10, pg. 175 (1999)

Lin, A.J., N.L. Slack, A. Ahmad, I. Koltover, C.X. George, C.E. Samuel, and C.R. Safinya, "Structure-function studies of lipid-DNA nonviral gene delivery systems," *J. of Drug Targeting*, in press (1999)

Lukens, W. W., Jr., P. Schmidt-Winkel, D. Zhao, J. Feng, and G. D. Stucky, "Evaluating pore sizes in mesoporous materials: A simplified standard adsorption method and a simplified Broekhoff-de Boer method," *Langmuir*, Vol. 15, pg. 5403 (1999)

Marlow, F., M.D. McGehee, D. Zhao, B.F. Chmelka, and G.D. Stucky, "Doped mesoporous silica fibers: A new laser material," *Adv. Mater.*, Vol. 11, pg. 632 (1999)

Mateescu, E.M., C. Jeppesen, and P. Pincus, "Overcharging of a spherical macroion by an oppositely charged polyelectrolyte," *Europhys. Lett.*, Vol. 46, pg. 493 (1999)

Mellot, C.F. and A.K. Cheetham, "Predicting extra-framework cation positions in zeolites: Energy minimization and (N,V,T) Monte Carlo simulations in LiLSX," *Proc. 12th International Zeolite Conference*, Ed. M.M.J. Treacy, B.M. Marcus, M.E. Bisher, J.B. Higgins (Mat. Res. Soc., Warrendale, PA) pg. 2767 (1999)

Melosh, N.A., P. Lipic, F.S. Bates, F. Wudl, G.D. Stucky, G.H. Fredrickson, and B.F. Chmelka, "Molecular and mesoscopic structures of transparent block copolymer-silica monoliths," *Macromolecules*, Vol. 32, pg. 4332 (1999)

Moran, P.M. and F.F. Lange, "Microscale lithography via channel stamping: Relationships between capillarity, channel filling and debonding," *App. Phys. Lett.*, Vol. 74, pg. 1332 (1999)

Morey, M.S., G.D. Stucky, S. Schwarz, and M. Fröba, "Isomorphic substitution and post-synthesis Incorporation of zirconium into MCM-48 mesoporous silica," *J. Phys. Chem.*, Vol. B103, pg. 2037 (1999)

Morse, D.E., "Silicon biotechnology: Harnessing biological silica production to make new materials," *Trends in Biotechnology*, Vol. 17, pg. 230 (1999)

Munch, V., F. Taulelle, T. Loiseau, G. Férey, A.K. Cheetham, S. Weigel, and G.D. Stucky, "A set of two-dimensional solid state NMR experiments providing topological information for structure refinement of TMP-GaPO," *Magn. Reson. Chem.*, Vol. 37 (special issue ISMAR AMPERE meeting, 1998), pg. S100 (1999)

Natarajan, S., R. Vaidyanathan, C.N.R. Rao, S. Ayyappan, and A.K. Cheetham, "Layered Tin(II) oxalates possessing large apertures," *Chem. Mater.*, Vol. 11, pg. 1633 (1999)

Nielsen, S., J. Carlson, and K. Olsen, "The influence of friction and fault geometry on earthquake rupture," *J. Geophys. Res.*, in press (1999)

Nissan, T.A., B. Oliphant, and J.J. Perona, "An engineered class I transfer RNA with a class II tertiary fold," *RNA-A Publication of the RNA Society*, Vol. 5, pg. 434 (1999)

Pincus, P., "Conformational dynamics of vesicles," *Proc. Natl. Acad. Sci. USA*, Vol. 96, pg. 10550, (1999)

Polli, A. D., F. F. Lange, M. Ahlskog, R. Menon and A.K. Cheetham, "Processing magnetoresistive thin films via chemical solution deposition", *J. Mater. Res.*, Vol. 14, pg. 1337 (1999)

Polli, A.D., F.F. Lange, and C.G. Levi, "Metastability of the fluorite, pyrochlore and perovskite structures in the PbO-ZrO₂-TiO₂ system," *J. Amer. Ceram. Soc.*, in press (1999)

Safinya, C.R. and I. Koltover, "Self assembled structures of lipid-DNA nonviral gene delivery systems from synchrotron X-Ray diffraction," in Non-Viral Vectors for Gene Therapy, Eds. Leaf Huang, Mien-Chie Hung, and Ernst Wagner, Academic Press, San Diego (1999)

Satishkumar, B.C., A. Govindaraj, K.R. Harikumar, and J.P. Zhang, "Boron-carbon nanotubes from the pyrolysis of C₂H₂-B₂H₆ mixtures," *Chemical Physics Letters*, Vol. 300, pg. 473 (1999)

Schmidt-Winkel, P., W.W. Lukens, Jr., D. Zhao, P. Yang, B.F. Chmelka and G.D. Stucky, "Mesocellular siliceous foams with uniformly sized cells and windows", *J. Am. Chem. Soc.*, Vol. 121, pg. 254 (1999)

Schmidt-Winkel, P., P. Yang, D. I. Margolese, B. F. Chmelka, and G. D. Stucky, "Fluoride-induced hierarchical ordering of mesoporous silica in aqueous acid-syntheses", *Adv. Mater.*, Vol. 11, pg. 303 (1999)

Schulze, U., H.-W. Schmidt, and C.R. Safinya, "Synthesis of novel cationic poly(ethylene glycol) containing lipids," *Bioconjugate Chemistry*, Vol. 10, pg. 548 (1999)

Smith, B. L., T. E. Schaeffer, M. Viani, J. B. Thompson, N. A. Frederick, J. Kindt, A. Belcher, G.D. Stucky, D. E. Morse and P. K. Hansma, "Molecular mechanistic origin of the toughness of natural adhesives, fibres and composites", *Nature*, Vol. 399, pg. 761 (1999)

Ternet, D., R. G. Larson and L. G. Leal, "Flow-aligning and tumbling in small-molecule liquid crystals: pure components and mixtures", *Rheol Acta*, Vol. 38, pg. 183 (1999)

Terrones, M., P. Redlich, N. Grobert, S. Trasobares, W.K. Hsu, H. Terrones, Y.Q. Zhu, J.P. Hare, A.K. Cheetham, M. Rühle, H.W. Kroto, and D.R.M. Walton, "Carbon nitride nanocomposites: Formation of aligned C_xN_y nanofibres," *Adv. Mater.*, Vol. 11, pg. 655 (1999)

Terrones, M., H. Terrones, N. Grobert, W.K. Hsu, Y.Q. Zhu, J.P. Hare, H.W. Kroto, D.R.M. Walton, P. Kohler-Redlich, M. Rühle, J.P. Zhang, and A.K. Cheetham, "An efficient route to large arrays of CN_x nanofibres by pyrolysis of ferrocene/melamine mixtures," *Applied Physics Letters*, Vol. 75, pg. 3932 (1999)

Thomson, N. H., B.L. Smith, N. Almqvist, L. Schmitt, M. Kashlev, E. T. Kool, and P.K. Hansma, "Oriented, active Escherichia coli RNA polymerase: An atomic force microscope study", *Biophysical Journal*, Vol. 76, pg. 1024 (1999)

Vaidhayanathan, R., S. Natarajan, A.K. Cheetham, and C.N.R. Rao, "New open-framework zinc oxalates synthesized in the presence of structure-directing organic amines," *Chem. Mater.*, Vol. 11, pg. 3636 (1999)

Williams, S.R., H.D. Maynard, and B.F. Chmelka, "Synthesis of ^{13}C -enriched pyrrole from 2- ^{13}C D-galactose," *J. Labelled Cpd. Radiopharm.*, Vol. 42, pg. 927 (1999)

Wong, J.Y., J. Majewski, M. Seitz, C.K. Park, J.N. Israelachvili, and G.S. Smith, "Polymer-cushioned bilayers. 1. A structural study of various preparation methods using neutron reflectometry," *Biophys. J.*, Vol. 77, pg. 1445 (1999)

Woodward, P.M., T. Vogt, D.E. Cox, C.N.R. Rao, and A.K. Cheetham, "The effect of compositional fluctuations on the phase transitions in $(\text{Nd}_{1/2}\text{Sr}_{1/2})_{0.95}\text{MnO}_3$," *Chem. Mater.*, Vol. 11, pg. 3528 (1999)

Yang, P., D. Zhao, D.I. Margolese, B.F. Chmelka, and G.D. Stucky, "Block copolymer templating syntheses of mesoporous metal oxides with large ordering lengths and semicrystalline framework," *Chem Mater.*, Vol. 11, pg. 2813 (1999)

Yokoyama, H., E.J. Kramer, D.A. Hajduk, and F.S. Bates, "Diffusion in mixtures of asymmetric block copolymers with homopolymers," *Macromolecules*, Vol. 32, pg. 3353 (1999)

Yu, M., J. Hwang, and T. J. Deming, "Role of L-3,4-Dihydroxyphenylalanine in mussel adhesive proteins", *J. of Amer. Chem. Soc.*, Vol. 121, pg. 5825 (1999)

Yu, M., A.P. Nowak, D.P. Pochan, and T.J. Deming, "Methylated mono- and diethyleneglycol functionalized polylysines: Nonionic, helical, water soluble polypeptides," *J. Am. Chem. Soc.*, Vol. 121, pg. 12210 (1999)

Zhao, D., Q. Huo, J. Feng, J. Kim, Y. Han, and G.D. Stucky, "Novel mesoporous silicates with two-dimensional mesostructure direction using rigid bolaform surfactants," *Chem. Mater.*, Vol. 11, pg. 2668 (1999)

Zhao, D., P. Yang, B.F. Chmelka, and G.D. Stucky, "Multiphase assembly of mesoporous-macroporous membranes," *Chemistry of Materials*, Vol. 11, pg. 1174 (1999)

Zhou, Y., K. Shimizu, J.N. Cha, G.D. Stucky, and D.E. Morse, "Efficient catalysis of polysiloxane synthesis by silicatein requires specific hydroxy and imidazole functionalities," *Angew. Chem. Int. Ed. Engl.*, Vol. 38, pg. 780 (1999)