

Primary MRSEC Support

IRG1

E. Mateescu, "Comment on 'Long-range electrostatic interactions between like-charged colloids: Steric and confinement effects'," *Phys. Rev. E* **64**, 013401 (2001)

IRG2

J.H. Kim, T.J. Ha, C.I. Cheon, F.F. Lange, "Epitaxial growth of (001)-oriented and (116)-oriented SrBi₂Ta₂O₉ thin films by chemical solution deposition method," *J. Crystal Growth* **225**, 366 (2001)

J.H. Kim, Y. Kim, A.T. Chien, F.F. Lange, "Epitaxial growth of PbZr_{0.5}Ti0.5O₃ thin films on SrRuO₃ substrates using chemical solution deposition: Microstructural and ferroelectric properties," *J. Mater. Res.* **16**, 1739 (2001)

D. Kisailus, F.F. Lange, "Growth of epitaxial GaN on LiGaO₂ substrates via a reaction with ammonia," *J. Mat. Res.* **16**, 2077 (2001)

F.F. Lange, G.K.L. Goh, "Hydrothermal epitaxial growth of Peroskite films," *J. Ceram. Proc. Res.* **2**, 4 (2001)

IRG3

K.R. Brzezinska, T.J. Deming, "Synthesis of ABA triblock copolymers via acyclic diene metathesis polymerization and living polymerization of α -amino acid-N-carboxyanhydrides," *Macromolecules* **34**, 4348 (2001)

H.D. Maynard, S.-P. Lyu, G.H. **Fredrickson**, F. Wudl, B.F. **Chmelka**, "Synthesis of nanophase-segregated poly(vinyl acetate)-poly(dimethylsiloxane) and poly(vinyl acetate)-poly(styrene) graft copolymers," *Polymer* **42**, 7567 (2001)

IRG4

J.J. Benkoski, G.H. **Fredrickson**, E.J. **Kramer**, "The effects of composition drift on the effectiveness of random copolymer reinforcement at polymer-polymer interfaces," *J Polym Sci B* **39**, 2763 (2001)

C.F. Creton, E.J. **Kramer**, H.R. Brown, C.-Y. Hui, "Adhesion and fracture of interfaces between immiscible polymers: From the molecular to the continuum scale," *Adv. Polymer Sci.* **156**, 55 (2001)

F. Drolet, G.H. **Fredrickson**, "Optimizing chain bridging in complex block copolymers," *Macromolecules* **34**, 5317 (2001)

Partial Support

IRG1

K. Ahn, K.H. Yoon, M.W. Kim, "Thickness dependence of surface modes on a gel," *Europhys. Lett.* **54**, 199 (2001)

J.G. DeLuca, C.N. Newton, R.H. Himes, M.A. Jordan, L. **Wilson**, "Purification and characterization of native conventional kinesin, HSET, and CENP-E from mitotic HeLa cells," *J. Biol. Chem.* **276**, 28014 (2001)

Y. Golan, A. Martin-Herranz, Y. Li, C.R. **Safinya**, J. **Israelachvili**, "Direct observation of shear-induced orientational phase coexistence in a lyotropic system using a modified X-ray surface forces apparatus," *Physical Review Letters* **86**, 1263 (2001)

T. Gore, Y. Dori, Y. Talmon, M. **Tirrell**, H. Bianco-Peled, "Self-assembly of model collagen peptide amphiphiles," *Langmuir* **17**, 5352 (2001)

A. Lau, D. Levine, P. **Pincus**, "Electrostatic attraction of coupled Wigner crystals: Finite temperature effects," *Phys. Rev. E* **63**, U244 (2001)

L. Li, C.W. Macosko, G.L. Korba, A.V. Pocius, M. **Tirrell**, "Interfacial energy and adhesion between acrylic pressure sensitive adhesives and release coatings," *J. Adhesion* **77**, 95 (2001)

L. Li, M. **Tirrell**, G.A. Korba, A. Pocius, "Surface energy and adhesion studies on acrylic pressure sensitive adhesives," *J. Adhesion* **76**, 307 (2001)

Y. Li, Y. Golan, A. Martin-Herranz, O. Pelletier, M. Yasa, J. **Israelachvili**, C. **Safinya**, "Structure of a lamellar fluid under confinement and shear studied using the second generation X-ray surface forces apparatus (XSFA-II) and X-ray micro-diffraction," *Int. J. Thermophys* **22**, 1175 (2001)

N.L. Slack, P. Davidson, M.A. Chibbaro, C. Jeppesen, P. Eiselt, H.E. Warriner, H W. Schmidt, P. **Pincus**, C.R. **Safinya**, "The bridging conformations of double-end anchored polymer-surfactants destabilize a hydrogel of lipid membranes," *J. Chem. Phys.* **115**, 6252 (2001)

M.N. Tamashiro, E. Hernandez-Zapata, P.A. Schorr, M. Balastre, M. **Tirrell**, P. **Pincus**, "Salt dependence of compression normal forces of quenched polyelectrolyte brushes," *J. of Chem. Physics* **115**, 1960 (2001)

M.N. Tamashiro, P. **Pincus**, "Helix-coil transition in homopolypeptides under stretching," *Phys. Rev. E* **63**, U510 (2001)

J. Texter, M. **Tirrell**, "Chemical processing by self-assembly," *AIChE Journal* **47**, 1706 (2001)

M. **Tirrell**, A.K. Dillow, S.E. Ochsenhirt, J.B. McCarthy, G.B. Fields, "Adhesion of a5b1 receptors to biomimetic substrates constructed from peptide amphiphiles," *Biomaterials* **22**, 1493 (2001)

M. **Tirrell**, S.M. Kilbey, H. Watanabe, "Structure and scaling of polymer brushes near the theta condition," *Macromolecules* **34**, 5249 (2001)

M. **Tirrell**, L. Li, V.S. Mangipudi, A.V. Pocius, "Direct measurement of surface and interfacial energies of glassy polymers and PDMS," 305, in Fundamentals of Tribology and Bridging the Gap between the Macro- and Micro/Nanoscales, B. Bhushan, ed, Kluwer, Amsterdam (2001)

M. **Tirrell**, M.N. Tamashiro, E. Hernández-Zapata, P.A. Schorr, M. Balastre, P. **Pincus**, "Salt dependence of compression normal forces of quenched polyelectrolyte brushes," *J Chem. Phys.* **115**, 1960 (2001)

IRG2

B.A. Adair, N. Guillou, M. Alvarez, G. Férey, A.K. **Cheetham**, "Synthesis and structures of layered and tubular antimony(III) phosphonates," *J. Solid State Chem.* **162**, 347 (2001)

A. Boutin, S. Buttefey, A.H. Fuchs, A.K. **Cheetham**, "Molecular simulation of adsorption of guest molecules in zeolitic materials ; a comparative study of intermolecular potentials," *Molecular Simulation* **27**, 371 (2001)

B.J. Campbell, A.K. **Cheetham**, T. Vogt, L. Carluccio, W.O. Parker Jr., C. Flego, R. Millini, "The determination of Brønsted acid sites in zeolite ERS-7," *J. Phys. Chem.* **105**, 1947 (2001)

J-S. Chang, S-E Park, Q. Gao, G. Férey, A.K. **Cheetham**, "Catalytic conversion of butadiene to ethylbenzene over nanoporous nickel(II) phosphate, VSB-1," *J.C.S. Chem. Comm.*, 859 (2001)

A.K. **Cheetham**, H. Fjellvag, T.E. Gier, K.O. Kongshaug, K.P. Lillerud, G.D. **Stucky**, "Very open microporous materials: From concept to reality," *Stud. Surf. Sci. Catal.* **135** (Zeolites and Mesoporous Materials at the Dawn of the 21st Century), 788 (2001)

A.H. Fuchs, A.K. **Cheetham**, "Adsorption of guest molecules in zeolitic materials: computational aspects," *J. Phys. Chem.* **105**, 7375 (2001)

N. Guillou, Q. Gao, P.M. Forster, J-S. Chang, M. Nogues, S-E. Park, G. Férey, A.K. **Cheetham**, "Synthesis and characterization of the nickel(II) phosphate, VSB-5; a nanoporous hydrogenation catalyst," *Angew. Chem.* **40**, 2831 (2001)

D.E. **Morse**, "Biotechnology reveals new routes to synthesis and structural control of silica and polysilsesquioxanes," in: *The Chemistry of Organic Silicon Compounds* (Z. Rappoport and Y. Apeloig, eds.); John Wiley & Sons, New York **3**, 805 (2001)

S. Neeraj, P.M. Forster, C.N.R. Rao, A.K. **Cheetham**, "A new route for the synthesis of open-framework metal phosphates using organophosphates," *JCS Chem. Comm.*, 2716 (2001)

M. Puchinger, T. Wagner, P. Finni, D. Kisailus, U. Beck, J. Bill, F. Aldinger, E. Arzt, F.F. **Lange**, "Chemical solution deposition derived buffer layers for MOCVD-grown GaN Films," *J. Crystal Growth* **233**, 57 (2001)

C.N.R. Rao, A. K. **Cheetham**, "Science and technology of nanomaterials: Current status and future prospects," *J. Mat. Chem.* **11**, 2887 (2001)

B.J. Scott, G. Wirnsberger, M.D. McGehee, B.F. **Chmelka**, G.D. **Stucky**, "Dye-doped mesostructured silica as a distributed feedback laser fabricated by soft lithography," *Adv Mater.* **13**, 1231 (2001)

B.J. Scott, G. Wirnsberger, G.D. **Stucky**, "Mesoporous and mesostructured materials for optical applications," *Chem. Mater.* **13**, 3140 (2001)

K. Shimizu, Y. Del Amo, M.A. Brzezinski, G.D. **Stucky**, D.E. **Morse**, "Novel fluorescent silica tracer for biological silification studies," *Chemistry & Biology* **8**, 1051 (2001)

N. Stock, G.D. **Stucky**, A.K. **Cheetham**, "Synthesis and characterization of the manganese pyroarsenate $\text{Mn}_2\text{As}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$," *Naturforschung B* **56**, 359 (2001)

G. Theurich, N.A. **Hill**, "Self-consistent treatment of spin-orbit coupling in solids using relativistic fully separable *ab initio* pseudopotentials," *Phys. Rev. B* **64**, 073106 (2001)

J.B. Thompson, B. Drake, J.H. Kindt, J. Hoskins, P.K. **Hansma**, "Assessing the quality of scanning probe microscope designs," *Nanotechnology* **12**, 394 (2001)

J.B. Thompson, G.T. Paloczi, J. H. Kindt, M. Michenfelder, B.L. Smith, G.D. **Stucky**, D.E. **Morse**, P.K. **Hansma**, "Direct observation of calcite to aragonite growth as induced abalone shell proteins," *Biophys. J.* **79**, 3307 (2001)

G. Wirnsberger, M.H. Bartl, B.J. Scott, G.D. **Stucky**, "Mesostructured optical devices by room-temperature self-assembly," *Aust. J. Chem.* **54**, 225 (2001)

G. Wirnsberger, B. Scott, G.D. **Stucky**, "pH sensing with mesoporous thin films," *Chem Comm.*, 119 (2001)

G. Wirnsberger, P. Yang, B.J. Scott, B.F. **Chmelka**, G.D. **Stucky**, "Mesostructured materials for optical applications: From Low-k dielectrics to sensors and lasers," *Spectrochim Acta*. **57A**, 2049 (2001)

B. Zhang, B. Wustman, D.E. **Morse**, J.S. Evans, "Model peptide studies of sequence regions in the elastomeric biomineralization protein, Lustrin A. I. The C-domain consensus -PG-, -NVNCT- motif," *Biopolymers* **63**, 358 (2001)

A. Falsafi, F.S. Bates, "Role of chain architecture in the adhesion of block copolymers," *Macromolecules* **34**, 1323 (2001)

J.M. Kim, S-E Park, G.D. **Stucky**, "Mesostructure design using a mixture of nonionic amphiphilic block copolymers," *Stud. Surf. Sci. Catal.* **135** (Zeolites and Mesoporous Materials at the Dawn of the 21st Century), 1345 (2001)

R.A. Segalman, H. Yokoyama, E.J. **Kramer**, "Graphoepitaxy of spherical domain block copolymer films," *Adv. Materials* **13**, 1152 (2001)

E. Sivaniah, J. Genzer, G.H. **Fredrickson**, E.J. **Kramer**, M. Xiang, X. Li, C. Ober, S. Magonov, "Periodic surface topology of three-arm semi-fluorinated alkane monodendron diblock copolymers," *Langmuir* **17**, 4342 (2001)

G. Wirnsberger, P. Yang, H.C. Huang, B. Scott, T. Deng, G.M. Whitesides, B.F. **Chmelka**, G.D. **Stucky**, "Patterned block-copolymer-silica mesostructures as host media for the laser dye rhodamine 6G," *J. Phys. Chem. B* **105**, 6307 (2001)

IRG4

F.S. Bates, G.H. **Fredrickson**, D. Hucul, S.F. Hahn, "PCHE-based pentablock copolymers: evolution of a new plastic," *AIChE J.* **47**, 762 (2001)

J. Groenewold, G.H. **Fredrickson**, "Elastic interactions and stability of clay-filled lamellar phases," *E. Phys. J. E* **5**, 171 (2001)

J.W. Ha, L.G. **Leal**, "An experimental study of drop deformation and breakup in extensional flow at high capillary numbers," *Physics of Fluids* **13**, 1568 (2001)

C. Jeppesen, J.Y. Wong, T.L. Kuhl, J.N. **Israelachvili**, N. Mullah, S. Zalipsky, C.M. Marques, "Impact of polymer tether length on multiple ligand-receptor bond formation," *Science* **293**, 465 (2001)

J.S. **Langer**, "Microstructural shear localization in plastic deformation of amorphous solids," *Phys. Rev. E* **64**, 011504 (2001)

L.G. **Leal**, "Flow-induced coalescence of drops in a viscous liquid," Proc. Of the Microgravity Transport Processes in Fluid, Thermal, Biological and Materials Sciences II, United Engineering Foundation (edited S.S. Sadhal), Banff, Canada, 167 (2001)

H. Yang, C.C. Park, Y.T. Hu, L.G. **Leal**, "The coalescence of two equal-sized drops in a two-dimensional linear flow," *Physics of Fluids* **13**, 1087 (2001)

Seed

C. Brandli, T.F. Jaramillo, A. Ivanovskaya, E.W. **McFarland**, "Automated synthesis and characterization of diverse libraries of macroporous alumina," *Electrochim. Acta* **47**, 553 (2001)

K.V. Sarathy, P.V. Vanitha, R. **Seshadri**, A.K. **Cheetham**, C.N.R. Rao, "Electron-hole asymmetry in rare earth manganates; a comparative study of the hole- and E electron-doped materials," *Chem. Mater.* **13**, 787 (2001)

Shared Facilities

H. Bianco-Peled, Y. Dori, J. Schneider, L-P Sung, S. Satija, M. **Tirrell**, "Structural study of Langmuir monolayers containing lipidated poly(ethylene glycol) and peptides," *Langmuir* **17**, 6931 (2001)

F. Bringezu, J. Ding, G. Brezesinski, J. **Zasadzinski**, "Changes in model lung surfactant monolayers induced by palmitic acid," *Langmuir* **17**, 4641 (2001)

J.D. Bryan, G.D. **Stucky**, "Eu₄Ga₈Ge₁₆: A new thermoelectric 4-coordinate clathrate network," *Chem. Mater.* **13**, 253 (2001)

S.C. Christiansen, D. Zhao, M.T. Janicke, C.C. Landry, G.D. **Stucky**, B.F. **Chmelka**, "Molecularly ordered inorganic frameworks in layered silicate-surfactant mesophases," *J Am. Chem. Soc.* **123**, 4519 (2001)

G. Delgado, A.J. Mora, A. Bahsas, "Zwitterionic 4-piperidinecarboxylic acid monohydrate," *Acta Crystall.*, Sec. C **57**, 965 (2001)

C. Drummond, N. Alcantar, J. **Israelachvili**, R. Tenne, Y. Golan, "Microtribology and friction-induced material transfer in WS₂ nanoparticle additives," *Advanced Functional Materials* **11**, 348 (2001)

C. Elsass, C. Poblenz, B. Heying, P. Fini, P.M. Petroff, S.P. DenBaars, U.K. Mishra, J.S. **Speck**, A. Saxler, S. Elhamrib, W.C. Mitchell, "Influence of growth temperature and thickness of AlGaN caps on electron transport in AlGaN/GaN heterostructures grown by plasma-assisted molecular beam epitaxy," *Japanese Journal of Applied Physics* **40**, Part 1, 6235 (2001)

V. Ganesan, G.H. **Fredrickson**, "Field-theoretic polymer simulations," *Europhys. Lett.* **55**, 814 (2001)

B.S. Gaylord, S. Wang, A.J. **Heeger**, G.C. **Bazan**, "Water-soluble conjugated oligomers: Effect of chain length and aggregation on photoluminescence-quenching efficiencies," *J. Amer. Chem. Soc.* **123**, 6417 (2001)

C.K. Gurumurthy, E.J. **Kramer**, C.-Y. Hui, "Hydro-thermal fatigue of polymer interfaces," *Acta Materialia* **49**, 3309 (2001)

C.K. Gurumurthy, E.J. **Kramer**, C.-Y. Hui, "Water-assisted sub-critical crack growth along an interface between polyimide passivation and epoxy underfill," *Intern. J. of Fracture* **109**, 1 (2001)

H.T. Jung, B. Coldren, J. **Zasadzinski**, D. Iampietro, E.W. Kaler, "The origins of stability of spontaneous vesicles," *Proceedings of the National Academy of Sciences* **98**, 1353 (2001)

T.M. Katona, M.D. Craven, P.T. Fini, J.S. **Speck**, S.P. DenBaars, "Observation of crystallographic wing tilt in cantilever epitaxy of GaN on silicon carbide and silicon (111) substrates," *Appl. Phys. Lett.* **79**, 2907 (2001)

K.Y.C. Lee, J. Majewski, T.L. Kuhl, P.B. Howes, K. Kjaer, M.M. Lipp, A.J. Waring, J.A. **Zasadzinski**, G.S. Smith, "Synchotron X-ray study of lung surfactant-specific protein SP-B in lipid monolayers," *Biophysical Journal* **81**, 572 (2001)

K.Y.C. Lee, J. Majewski, A. von Nahmen, A. Gopal, P.B. Howes, K. Kjaer, G.S. Smith, J. **Zasadzinski**, "Influence of palmitic acid and hexa decanol on the phase transition temperature and molecular packing of dipalmitoylphosphatidyl-choline monolayers at the air-water interface," *J. Chemical Physics* **116**, 774 (2002)

Y. Li, Y. Golan, A. Martin-Herranz, O. Pelletier, M. Yasa, J. **Israelachvili**, C. **Safinya**, "In situ X-ray diffraction studies of a multilayered membrane fluid under confinement and shear," *Int. J. Thermophysics* **22**, 1175 (2001)

Y. Li, T. Pfohl, J.H. Kim, M. Yasa, Z. Wen, M.W. Kim, C.R. **Safinya**, "Selective surface modification in silicon microfluidic channels for micromanipulation of biological macromolecules," *Biomedical Microdevices* **3**, 239 (2001)

W.W. Lukens, Jr., P. Yang, G.D. **Stucky**, "Synthesis of mesocellular foams with tunable window and cell dimensions," *Chem. Mater.* **13**, 28 (2001)

H. Marchand, L. Zhao, N. Zhang, B. Moran, R. Coffie, U.K. Mishra, J.S. **Speck**, S.P. DenBaars, J.A. Freitas, "Metalorganic chemical vapor deposition of GaN on Si(111): Stress control and application to field-effect transistors," *J. of Appl. Phys.* **89**, 7846 (2001)

S.K. Mathis, K.H.A. Lau, A.M. Andrews, E.M. Hall, G. Almuneau, E.L. Hu, J.S. **Speck**, "Lateral oxidation kinetics of AlAsSb and related alloys lattice matched to InP," *J. of Appl. Phys.* **89**, 2458 (2001)

M.M. Mitani, A.A. Keller, S.J. Golden, R. Hatfield, A.K. **Cheetham**, "Low temperature catalytic decomposition and oxidation of MTBE," *Applied Catalysis B: Env.* **34**, 87 (2001)

A.J. Mora, G. Delgado, G. Díaz de Delgado, A. Usbillaga, N. Khouri, A. Bahsas, "3 α -Hydroxytirucalla-7, 24-dien-21-oic acid: a triterpene from *Protium crenatum* Sandwith," *Acta Crystall.*, Sec. C **57**, 638 (2001)

T. Pfohl, J.H. Kim, M. Yasa, H.P. Miller, G.C.L. Wong, F. Bringezu, Z. Wen, L. **Wilson**, M.W. Kim, Y. Li, C.R. **Safinya**, "Controlled modification of microstructured silicon surfaces for confinement of biological macromolecules and liquid crystals," *Langmuir* **17**, 5343 (2001)

M.R. Robinson, S. Wang, A.J. **Heeger**, G.C. **Bazan**, "A tetrahedral oligo(phenylenevinylene) molecule of intermediate dimensions: Effect of molecular shape on the morphology and electroluminescence of organic glasses," *Advanced Functional Materials* **11**, 413 (2001)

S. Sanvito, N.A. **Hill**, "Ab initio transport theory for digital ferromagnetic heterostructures," *Phys. Rev. Lett.* **87**, 267202 (2001)

S. Sanvito, N.A. **Hill**, "Influence of the local As antisite distribution on ferromagnetism in (Ga,Mn)As," *Appl. Phys. Lett.* **78**, 3493 (2001)

S. Sanvito, P. Ordejon, N.A. **Hill**, "First principle study of the origin and nature of ferromagnetism in (Ga,Mn)As," *Phys. Rev. B* **63**, 165206 (2001)

K. Schofield, "The kinetic nature of sulfur's chemistry in flames," *Combustion and Flame* **124**, 137 (2001)

I.P. Smorchkova, L. Chen, T. Mates, L. Shen, S. Heikman, B. Moran, S. Keller, S.P. DenBaars, J.S. **Speck**, U.K. Mishra, "AlN/GaN and (Al,Ga)N/AlN/GaN two-dimensional electron gas structures grown by plasma-assisted molecular-beam epitaxy," *J. of Appl. Phys.* **90**, 5196 (2001)

N. Stock, G.D. **Stucky**, A.K. **Cheetham**, "Influence of the cation size on the formation of alluaudite-type manganese arsenates: Synthesis and characterization of Tl₂Mn₃(As₂O₇)₂·2H₂O, CsMn₃(AsO₄)(HAsO₄)₂·3H₂O, and XMn₃(AsO₄)(HAsO₄)₂ (X = Na, K)," *J. Phys. Chem. Solids* **62**, 1457 (2001)

D.Y. Takamoto, E. Aydil, J. **Zasadzinski**, A. Ivanova, D. Schwartz, T. Yang, P. Cremer, "Stable ordering in Langmuir-Blodgett films," *Science* **293**, 1292 (2001)

G. Telbiz, O. Shvets, S. Boron, V. Vozny, M. Brodyn, G.D. **Stucky**, "Laser dye doped mesoporous silica fibers: Host-guest interaction and fluorescence properties," *Stud. Surf. Sci. Catal.* **135** (Zeolites and Mesoporous Materials at the Dawn of the 21st Century), 3564 (2001)

J. Thompson, B. Drake, J. Kindt, D.E. **Morse**, P.K. **Hansma**, "Bone indentation recovery time correlates with bond reforming time," *Nature* **414**, 773 (2001)

B. Yan, Y. Xua, X. Bu, N.K. Goh, L.S. Chia, G.D. **Stucky**, "Hydrothermal syntheses and structures of three one-dimensional heteropolytungstates formed by Dawson or Keggin cluster units," *Dalton Trans.*, 2009 (2001)

C-S. Yang, D.D. Awschalom, G.D. **Stucky**, "Kinetic-dependent crystal growth of size-tunable CdS nanoparticles," *Chem. Mater.* **13**, 594 (2001)

C.Y. Yang, S. Wang, M. R. Robinson, G.C. **Bazan**, A.J. **Heeger**, "Crystal structures of Tetrakis(4,4'(2,2-diphenylvinyl)-1,1'-biphenyl)methane: Transmission electron microscopy and X-ray diffraction," *Chem. Of Materials* **13**, 2342 (2001)

J.A. **Zasadzinski**, J. Ding, H. Warriner, F. Bringezu, "The physics and physiology of lung surfactants," *Current Opinion in Colloid and Interface Science* **6**, 506 (2001)

J.A. **Zasadzinski**, E. Kisak, C. Evans, "Complex vesicle structures," *Current Opinion in Colloid and Interface Science* **6**, 85 (2001)

Patents

D.E. Morse, G.D. Stucky, J. Cha, "Methods and sensors for luminescent and optoelectronic detection and analysis for DNA and RNA," pending. Full US and International patent; application No. # 09/836,579.

D.E. Morse, G.D. Stucky, J. Gaul, "Methods and compositions for improved binding of histidine-containing proteins to substrates," Pending, full US patent application No. UC #2001-428 filed. Dow Corning shares this invention.

D.E. Morse, Y. Zhou, G.D. Stucky, "Bifunctional catalysts and methods for use for synthesis of impermeable coatings, membranes, sealants, encapsulants, insulators, polymers and materials of silica, glass, silicones and polometallo-oxanes at low temperatures and neutral pH," Pending, US Provisional Patent application UC #2000-265-2 filed April 4, 2001.

C.R. Safinya, H.E. Warriner, S.H.J. Idziak, "Lamellar gels and methods for making and using," US Patent No. 6,207,186 issued March 27, 2001.

K. Schofield, "Method for the prevention of high temperature corrosion due to alkali sulfates and chlorides and composition for use in the same," US Patent No. 6,328,911 B1, issued Dec. 11, 2001.

J. Zasadzinski, Patent issued for invention of the "Vesosome," "Bilayer structure which encapsulates multiple containment units and uses thereof." US Patent 6,221,401 B1, issued December 2001.