

C. JEFFREY BRINKER

A. Professional Preparation

Institution	Major/Area	Degree & Year
Rutgers University, New Brunswick, NJ	Ceramic Science	B.S., 6/72 (with High Honors).
Rutgers University, New Brunswick, NJ	Ceramic Science	M.S., 12/75
Rutgers University, New Brunswick, NJ	Ceramic Science	Ph.D., 12/78; Thesis Topic: "Alkali Metal Corrosion of Glass"

B. Current Appointments

<u>Distinguished and Regent's Professor, Emeritus</u> Departments of Chemical and Biological Engineering, Chemistry, Molecular Genetics and Microbiology, Co- Director Center for Micro-Engineered Materials The University of New Mexico, Albuquerque, NM. 87131; 505-277-6266 (office); jbrinker@unm.edu	<u>Sandia Fellow, Emeritus</u> Science and Technology Office Sandia National Laboratories, 1001 University Blvd SE, Albuquerque, NM 87106. 505-272-7627 (office); 505-259-4182 (mobile)
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C. Appointments and Affiliations:

2010 – Current: Member UNM Cancer Center

2018 – Current: Distinguished Professor of Chemical and Biological Engineering and Molecular Genetics and Microbiology, Emeritus, the University of New Mexico (UNM), Albuquerque, NM.

2008 - 2018: Distinguished Professor of Chemical and Biological Engineering and Molecular Genetics and Microbiology, the University of New Mexico (UNM), Albuquerque, NM. Highest UNM distinction. Research activities include self- and directed-assembly of 2D and 3D nanoscale materials and assemblies, molecular templating, atomic layer deposition, nano/micro/macro integration, and bio/nano interfaces.

2006-Current: Distinguished Affiliate Scientist at the Center for Integrated Nanotechnologies (CINT), a Department of Energy/Office of Science Nanoscale Science Research Center (NSRC).

2006–Current: Regent's Professor of Chemical and Biological Engineering and Molecular Genetics and Microbiology, UNM. Co-developed new graduate curriculum in nanoscience and Microsystems. Led statewide NSF EPSCOR program on nanoscience and nanotechnology.

2003–2019, Laboratory Fellow (1 of 4 among 10K employees – highest technical distinction), Sandia National Laboratories (SNL), Albuquerque, NM. Serves as resource for and provides guidance to SNL materials science and nanotechnology programs.

1999 – 2006, Professor of Chemistry and Chemical and Nuclear Engineering, UNM

1999 – 2003, Senior Scientist, Chemical Synthesis and Nanomaterials Department, SNL

1991 – 1999, Distinguished National Laboratory Professor of Chemistry and Chemical and Nuclear Engineering, UNM

1991 – 1998, Distinguished Member of the Technical Staff, Direct Fabrication Dept, SNL

1979 – 1991, Member of the Technical Staff, Chemistry and Ceramics Department, SNL

D. Honors and Awards

Awards and Honors

- 1988 W.H. Zachariasen Award for best contribution to the glass literature 1985-87, awarded by the Journal of Non-Crystalline Solids.
- 1986 Department of Energy Basic Energy Sciences Award for Outstanding Scientific Accomplishment in Metallurgy and Ceramics
- 1992 Elected Fellow of the American Ceramic Society
- 1993 Directeur de Recherche Universite Pierre et Marie Curie, Paris VI
- 1994 Department of Energy Basic Energy Sciences Award for Significant Implications for DOE Related Technologies in Metallurgy and Ceramics.

- 1995 Department of Energy Basic Energy Sciences Award for Sustained Outstanding Research in Metallurgy and Ceramics.
- 1996 American Chemical Society Ralph K. Iler Award in the Chemistry of Colloidal Materials.
- 1996 R&D 100 Award: Low Temperature/Pressure Aerogel Process
- 1996 Lockheed Martin NOVA Award
- 1998 Motorola/CMEM Research Mentorship Award
- 1998 Department of Energy Basic Energy Sciences Award for Outstanding Scientific Accomplishment in Metallurgy and Ceramics
- 2001 Collegiate Inventors Competition Award for Optically-Adjustable Nanostructures
- 2002 Elected to the National Academy of Engineering
- 2002 DOE Ernest O. Lawrence Memorial Award in Materials Science
- 2003 Materials Research Society MRS Medal
- 2005 University of New Mexico Research Excellence Award
- 2006 Directeur de Recherche Universite Pierre et Marie Curie, Paris VI
- 2006 Rutgers University Distinguished Alumnus Award
- 2007 R&D 100 Award: Self-Assembling Process for Fabricating Tailored Thin Films
- 2008 R&D100 Award: Patterned Superhydrophobic Surfaces
- 2008 Edward R. Orton Jr. Memorial Award, American Ceramic Society and ASM
- 2009 IBM Distinguished Lecturer in Materials Science and Engineering
- 2009 Named Fellow of the Materials Research Society
- 2010 Robert B. Sosman Award, American Ceramic Society
- 2011 R&D100 Award Biomimetic Water Purification Membranes
- 2012 Médaille du Collège de France, Paris
- 2012 Federal Laboratory Consortium, Notable Technology Development Award – Biomimetic Membranes
- 2013 Federal Laboratory Consortium, Outstanding Regional Partnership – UNM Health Sciences Center/Sandia National Laboratories Partnership
- 2014 Federal Laboratory Consortium, Notable Technology Development Award, Nano-Stabilized Enzymatic Membrane for CO₂ Capture
- 2014 Elected to Board of Directors, Materials Research Society (3 year term)
- 2015 Elected Fellow of the Materials Research Society
- 2015 University of New Mexico STC, Innovation Fellow Award
- 2015 R&D100 Award – CO₂ Memzyme
- 2015 R&D 100's 'Green Technology Special Recognition Gold Award' for CO₂ Memzyme
- 2015 UNM Presidential Medal of Distinction
- 2015 Elected to the US National Academy of Inventors
- 2017 Life Time Achievement Award in Sol-Gel Science and Technology
- 2018 Elected Fellow of the American Academy of Arts and Sciences

Editorial and Advisory Committees

- **Peer Review:** Associate Editor *ACS Nano*; Editorial Boards for *J. Nanomaterials*, *J. Sol-Gel Science/Technology*; *Small*; *Current Opinion in Solid State and Materials Science*,
- **Advisory Role:** Advisory Boards for International Workshop on Glasses and Ceramics from Gels; International Conference on Inorganic Membranes; International Conference on Multifunctional Hybrid and Nanomaterials (I-VI), International Symposium on Aerogels. Founder and Co-Organizer, Materials Research Symposium Series: *Better Ceramics Through*

Chemistry I, II, III, IV, V, VI and *Organic/Inorganic Hybrid Materials* I, II, III. Member, Board of Directors, Materials Research Society

E. Research Focus and Related Professional Activities

- Brinker actively worked to involve chemists in ceramic science and engineering by creating the very successful Materials Research Society symposium series, Better Ceramics Through Chemistry, which ran biennially for fourteen years and recently spawned a successor series on Organic/Inorganic Hybrid Materials. Commenced in 1984, this was arguably the first symposium series to focus on ‘bottom-up’ assembly of nanostuctured materials from molecular precursors and served as a primary basis for contemporary activities in nanotechnology.
- Brinker co-authored a textbook entitled, Sol-Gel Science: The Physics and Chemistry of Sol-Gel Processing (Academic Press, 1990), with George Scherer (Princeton University). This book has served as a valuable resource to the worldwide scientific community who are now working in this burgeoning field and remains the most highly cited textbook on sol-gel processing (over 10,000 copies sold).
- Brinker co-authored two chapters in Nanotechnology Research Directions for Societal Needs in 2020: Retrospective and Outlook, M.C. Roco, C.A. Mirkin, M.C. Hersam, eds. (October 2010): “Nanotechnology for Sustainability: Energy Conversion, Storage, and Conservation”, with David Ginger and “Nanotechnology for Sustainability: Environment, Water, Food, Minerals, and Climate” with M. Diallo.
- Brinker pioneered so-called ‘sol-gel processing’ as a means of solution-based synthesis of a wide range of inorganic and composite nanomaterials. By combining sol-gel processing with molecular self-assembly, he pioneered powerful evaporation-induced self-assembly procedures (six Science and Nature papers), enabling the facile synthesis of highly ordered porous and composite nanostructured films and particles. During the past several years he used self-assembled porous nanoparticles in the development of the protocell (a nanoporous particle supported lipid bilayer) as a universal targeted nanocarrier platform for selective delivery of multicomponent cargoes to cancer, a principle thrust area of the UNM Cancer Center and Health Sciences Research portfolios.
- Brinker’s combined appointments at UNM School of Engineering, the UNM Cancer Center, Sandia National Labs, and the Center for Integrated Nanotechnologies (CINT) a DOE Office of Science Nanoscale Science Research Center provide a rich training environment and access to a vast array of nanofabrication and nano-characterization tools and platforms. He directs research concerning the fabrication and structural, chemical, and functional characterization of nanostructures with a specific aim to engineer and optimize their *in vivo* performance as nanocarriers.

F. Major Student/Post-doc Awards and Fellowships:

- **Terisse Brocato** (PhD student) School of Engineering Award – the Charlotte and William Kraft Graduate Fellowship, the University of New Mexico, 2013-2015
- **Paul Durfee** (MS 2013, PhD student) Best poster award “Size and Surface Engineered Mesoporous Nanoparticles Direct Altered Biodistribution and Clearance”, P. Durfee, Y.S. Lin, J. Townson, J. Minster, C.J. Brinker. Rio Grande Symposium on Advanced Materials, RGSAM, October 2013, Albuquerque, NM
- **Paul Durfee** (MS 2013, PhD student) George D. Montoya Research Scholarship, the University of New Mexico, 2013
- **Paul Durfee** (MS 2013, PhD student) School of Engineering Award – the Charlotte and William Kraft Graduate Fellowship, the University of New Mexico, 2013-2014
- **Paul Durfee** (MS 2013, PhD student) Edmund J. and Thelma W. Evans Charitable Trust Scholarship, the University of New Mexico, 2012-2013.

- **Yu-Shen Lin** (U. Minnesota; post-doc) Center for Nanotechnology in Cancer Fellowship, the University of New Mexico, 2013-2014.
- **Jason Townson** (U. W. Ontario; post-doc) Junior Investigator Award, Gabrielle's Angels Foundation, 2012-2013.
- **Lauren Zarzar** (visiting graduate student, Harvard University) Akzo-Nobel Student Award, American Chemical Society, Denver, CO, August 28 – September 2, 2011. For work performed summers 2010-2011 while mentored by Bryan Kaehr, C. Jeffrey Brinker, published in *Angewandte Chemie*
- **David Padilla** (PhD student), Eric Carnes, Katie Epler, Robert Castillo, Genevieve Phillips, Jeff Brinker, Carlee Ashley, *The Selective Transfection of Hepatocellular Carcinoma Using Peptide Targeted Silica Nanoparticle-Supported Lipid Bilayers*, 23rd Rio Grande Symposium on Advanced Materials – RGSAM, Best Poster competition, 2nd place, Albuquerque, NM Oct 2011.
- **Mekensey Buley** (M.S. 2012) Graduate Research Fellowship (Nanoparticle Human Interactions), Sandia National Laboratories/University of New Mexico Excellence in Engineering Research Program, 2011-2012.
- **Carlee Ashley** (PhD May 2010), President Harry S. Truman Postdoctoral Fellowship, Sandia National Laboratories, 2010 – 2013.
- **Annikka Jensen** (PhD student), Integrated Graduate Education and Research Traineeship (IGERT) Fellowship in Integrating Nanotechnology with Cell Biology and Neuroscience, 2010-2012.
- **Carlee Ashley** (PhD May 2010), Outstanding Graduate student 2010, Chemical and Nuclear Engineering Department, the University of New Mexico.
- **Carlee Ashley** (PhD May 2010), Michael Gallegos Prize for Entrepreneurship, \$25,000, University of New Mexico Technology Business Plan Competition, April 2010
- **Carlee Ashley** (PhD May 2010), Materials Research Society Graduate Student Silver award, December 2009
- **Carlee Ashley** (PhD May 2010), Mekensey Buley (MS 2013), D.S. Peabody, and C.J. Brinker. Materials Research Society Fall Meeting, *Targeted in-vitro Delivery of a Chemotherapeutic Agent to Human Hepatocarcinoma via a Bacteriophage Carrier*, Top Poster Award, Open competition (599 entries), Dec 2008.
- **Carlee Ashley** (PhD May 2010), Darren Dunphy, **Eric Carnes** (PhD 2008), D. Petsev, P. Atanassov, D.S. Peabody, and C. J Brinker, Materials Research Society Fall Meeting, *Self-Assembly of Well-Ordered, Close-Packed 2D Arrays of Recombinant Virus-Like Particles that Nucleate the Growth of Inorganic Nanomaterials*, Top Ten Poster Award, Open competition (609 entries), December 2008.
- **Shisheng Xiong** (PhD Dec 2010), Y. Gao, J. Pang, John Grey, and C. J. Brinker. Materials Research Society Fall Meeting, *Functional Monolayer Nanoparticle/polymer Composites Formed by Evaporation Induced Self-Assembly at a Fluid Interface*, Top Ten Poster Award, Open competition (600 entries), Dec 2008.
- **Jennifer Pelowitz** (MS 2012), Integrated Graduate Education and Research Traineeship (IGERT) Fellowship in Integrating Nanotechnology with Cell Biology and Neuroscience, 2009-2011.
- **Patrick Johnson** (PhD student), Integrated Graduate Education and Research Traineeship (IGERT) Fellowship in Integrating Nanotechnology with Cell Biology and Neuroscience, 2008-2011
- **Adam Wise** (PhD 2012) Integrated Graduate Education and Research Traineeship (IGERT) Fellowship in Nanoscience and Microsystems, National Science Foundation, 2007-2010

- **Eric Carnes** (PhD July 2008), **Carlee Ashley** (PhD May 2010), NSF Ethics Fellows, the University of New Mexico, National Science Foundation Pilot Program between School of Engineering and Department of Philosophy graduate students to develop and team-teach *Engineering Ethics*, 2007-2008.
- **Carlee Ashley** (PhD May 2010), Integrated Graduate Education and Research Traineeship (IGERT) Fellowship in Nanoscience and Microsystems, National Science Foundation, 2006-2009
- **Ryan Molecke** (PhD 2011), Integrated Graduate Education and Research Traineeship (IGERT) Fellowship in Nanoscience and Microsystems, National Science Foundation, 2006-2009
- **Eric C. Carnes** (PhD 2008), 3rd Annual Symposium on Integrating Nanotechnology with Cell Biology and Neuroscience – INCBN IGERT, August 17-18, 2009, Albuquerque, NM, NSF IGERT Graduate Fellow Award
- **Eric Carnes** (PhD July 2008) Integrated Graduate Education and Research Traineeship (IGERT) Fellowship in Integrating Nanotechnology with Cell Biology and Neuroscience, National Science Foundation, 2006-2008
- **Cynthia M. Douthit** (undergrad Chem Eng), **Eric C. Carnes** (PhD 2008), **Carlee Ashley** (PhD 2010), **DeAnna Lopez** (undergrad Chem Eng), **Alex Capecehatro** (visiting student, UCLA), and C. Jeffrey Brinker. CCMC Fall 2008 Industrial Advisory Board (IAB) and Technical Review Meeting, University of New Mexico, Albuquerque, NM, November 18–20, 2008. *Examining Integration Techniques using Living Yeast Cells into Self-Assembled Nanostructures*, 1st place, student poster competition.
- **DeAnna Lopez** (undergrad Chem Eng), **Eric Carnes** (PhD 2008). Microscopy Facility Image Competition, Cancer Center Fluorescence Microscopy Facility, University of New Mexico, February 2008, Albuquerque, NM. First prize, Spectral Image category, Confocal microscope image “Cells Take the Lead” in Life in Print, Science News Online, Jan 26, 2008, vol. 173, no. 4, p. 56.
- **Carlee Ashley*** (PhD 2010), **Eric Carnes** (PhD 2008), Landon White (undergrad Chem Eng), Zhen Yuan, Darren Dunphy, Dimiter Petsev, Plamen Atanassov, David Peabody, Jin Wang, and C. Jeffrey Brinker. New Mexico Chapter of the American Vacuum Society, Albuquerque, NM, May 22, 2007. *Grazing Incidence Small Angle X-ray Scattering (GISAXS) Characterization of 2D Bacteriophage Arrays Deposited via Convective Assembly*, First prize*, Graduate Student Oral Paper Competition (* all expenses paid trip to the AVS 54th International Symposium, Seattle, WA, October 14-19, 2007).
- **Carlee Ashley** (PhD 2010), **Eric Carnes** (PhD 2008), Helen Baca, Deanna Lopez (undergrad Chem Eng), Seema Singh, Jeff Brinker. Industrial Advisory Board Meeting of the UNM/Rutgers/Penn State Ceramic and Composite Materials Center (CCMC), March 13, 2007, Albuquerque, NM. *Cell-Directed Assembly of 3-D Bio-Nano Interfaces*, First Prize, Graduate student poster competition.
- **The Top 20 Most-Cited Papers in Materials Science**, 1996-2006. In-cites Essential Science Indicators, <http://www.in-cites.com/papers/top20-mat-sci.html>, November 2006, *Continuous formation of supported cubic and hexagonal mesoporous films by sol-gel dip-coating*. Lu Y.F. (PhD 1998), Ganguli, R. (MS 1997), Drewien, C.A., Anderson, M.T., Brinker, C.J., Gong, W.L., Guo, Y.X. Soyez, H., Dunn, B., Huang, M.H., Zink, J.I., NATURE, v. 389, pp. 364-368 (1997).
- **Helen K. Baca** (PhD 2005), Materials Research Society Student Gold Award, 2005

- **Helen Baca** (PhD 2005), DoD National Science and Defense Graduate Fellowship, 2001- 2003
- **Dhaval Doshi** (PhD 2002) Los Alamos National Laboratory Director's Postdoctoral Fellowship, 2002-2004
- **Dhaval Doshi** (PhD 2002), Collegiate Inventors Competition Award, *Optically-Adjustable Nanostructures*, 2001
- **Dhaval Doshi** (PhD 2002), Materials Research Society Student Gold Award, 2001 **Yunfeng Lu** (PhD 1998), Presidential Early Career Award for Scientists and Engineers (PECASE), 2005.
- **Mencheng Lu** (PhD 2001), Materials Research Society Best Poster Award, 1999
- **Hongyou Fan** (PhD 2000), Materials Research Society Student Silver Award, 2000
- **Hongyou Fan** (PhD 2000), University of New Mexico Chemical Engineering Alumni Award for Outstanding Graduate student, 2000
- **Yunfeng Lu** (PhD 1998), Materials Research Society Student Gold Award, 1999
- **Yunfeng Lu** (PhD 1998), American Chemical Society Unilever (Young Investigator) Award in Colloid and Surface Chemistry, 2005
- **Yunfeng Lu** (PhD 1998), 31st American Chemical Society Victor K. LaMer PhD Thesis Award in Colloid and Surface Chemistry, 2000

F. BOOKS AND BOOK CHAPTERS

Books, authored

1. Sol-Gel Science: The Physics and Chemistry of Sol-Gel Processing
Brinker, C. Jeffrey and Scherer, George W.
Academic Press, San Diego, CA, April 1990

Books, edited

1. Better Ceramics Through Chemistry
Brinker, C. Jeffrey; Clark, David E.; and Ulrich, Donald R. editors. Materials Research Society Symposia Proceedings, Volume 32, North-Holland, New York/Amsterdam, 1984.
2. Better Ceramics Through Chemistry II
Brinker, C. Jeffrey; Clark, David E.; and Ulrich, Donald R., editors. Materials Research Society Symposia Proceedings, Volume 73, Materials Research Society, Pittsburgh, PA, 1986.
3. Better Ceramics Through Chemistry III
Brinker, C. Jeffrey; Clark, David E.; and Ulrich, Donald R., editors. Materials Research Society Symposia Proceedings, Volume 121, Materials Research Society, Pittsburgh, PA,

1988.

4. Better Ceramics Through Chemistry IV
Zelinski, Brian J.J.; Brinker, C. Jeffrey; Clark, David E.; and Ulrich, Donald R., editors. Materials Research Society Symposia Proceedings, Volume 180, Materials Research Society, Pittsburgh, PA, 1990.
5. Better Ceramics Through Chemistry V
Hampden-Smith, Mark; Klemperer, Walter G.; and Brinker, C. Jeffrey, editors. Materials Research Society Symposia Proceedings, Volume 271
Materials Research Society, Pittsburgh, PA, 1992.
6. Better Ceramics Through Chemistry VI
Cheetham, Anthony K.; Brinker, C. Jeffrey; Mecartney, Martha L.; and Sanchez, Clément, editors. Materials Research Society Symposia Proceedings, Volume 346, Materials Research Society, Pittsburgh, PA, 1994.
7. Organic/Inorganic Hybrid Materials
Laine, Richard M.; Sanchez, Clément; Giannelis, E.P.; and Brinker, C. Jeffrey, editors. Materials Research Society Symposia Proceedings, Volume 519, Materials Research Society, Pittsburgh, PA, 1998.
8. Aerogels 6
Ashley, Carol S.; Brinker, C. Jeffrey; and Smith, Douglas, M., editors. Proceedings of the Sixth International Symposium on Aerogels -- Special Issue of the *Journal of Non-Crystalline Solids*, Volume 286, North-Holland, New York/Amsterdam, 2000.
9. Organic/Inorganic Hybrid Materials II
Laine, Richard M.; Sanchez, Clément; Giannelis, E.P.; and Brinker, C. Jeffrey, editors. Materials Research Society Symposia Proceedings, Volume 628, Materials Research Society, Pittsburgh, PA, 2000.
10. Organic/Inorganic Hybrid Materials III
Sanchez, Clément; Laine, Richard M.; Yang, Shu; and Brinker, C. Jeffrey, editors. Materials Research Society Symposia Proceedings, Volume 628, Materials Research Society, Pittsburgh, PA, 2002.
11. Self-Assembled Nanostructured Materials
Lu, Yunfeng; Brinker, C. Jeffrey; Antonietti, Markus; and Chunli, B., editors. Materials Research Society Symposia Proceedings, Volume 775, Materials Research Society, Pittsburgh, PA, 2003.
12. Annual Review of Nano Research – Volume 1
Cao, Guozhong and Brinker C. Jeffrey Brinker, editors. World Scientific Publishing Co.,

Ltd., Singapore/London, 2006.

13. Annual Review of Nano Research – Volume 2
Cao, Guozhong and Brinker C. Jeffrey Brinker, editors. World Scientific Publishing Co., Ltd., Singapore/London, 2008.
14. Annual Review of Nano Research – Volume 3
Cao, Guozhong and Brinker C. Jeffrey Brinker, editors. World Scientific Publishing Co., Ltd., Singapore/London, 2010.

BOOK CHAPTERS

1. Brinker, C. J.: Dip Coating. In Chemical Solution Deposition of Functional Oxide Thin Films; Schneller, T., Waser, R., Kosec, M., Payne, D., Eds.; Springer Vienna, 2013; pp 233-261.
2. Nanotechnology for Sustainability: Energy Conversion, Storage, and Conservation, C. Jeffrey Brinker and David Ginger, in Nanotechnology Research for Societal Needs in 2020: Retrospective and Outlook, M.C. Rocco, C.A. Mirkin, M.C. Hersam, eds, Elsevier Press, Amsterdam (October 2010)
3. Nanotechnology for Sustainability: Environment, Water, Food, Minerals, and Climate, M. Diallo and C. Jeffrey Brinker, in Nanotechnology Research Directions for Societal Needs in 2020: Retrospective and Outlook, M.C. Rocco, C.A. Mirkin, M.C. Hersam, eds, Elsevier Press, Amsterdam (October 2010).
4. Control of Morphology in Mesoporous and Mesostructured Hybrid Materials
Darren R. Dunphy, Bernd Smarsly, C. Jeffrey Brinker
in The Supramolecular Chemistry of Organic-Inorganic Hybrid Materials, Knut Rurack, ed, John Wiley & Sons, Inc., Hoboken, NJ (March 2010)
5. Photoresponsive Nanocomposite Materials Including Axobenzene-Containing Polysilsesquixane Films and Photoswitched Nanovalves, Nanguo Liu and C. Jeffrey Brinker in Smart Light-Responsive Materials: Azobenzene Containing Polymers and Liquid Crystals, Yue Zhao and Tomiki Ikeda, eds., John Wiley & Sons, Inc., Hoboken, NJ Chapter 13, 457-504 (March 2009)

G. PUBLICATIONS, PEER-REVIEWED JOURNALS (h-index 97; citations = 55,025 see Google Scholar:
http://scholar.google.com/citations?hl=en&user=DZk5ffwAAAAJ&view_op=list_works&sortby=pubdate)

Refereed Journal papers published

1. Sun, B.; Pokhrel, S.; Dunphy, D. R.; Zhang, H.; Ji, Z.; Wang, X.; Wang, M.; Liao, Y.-P.; Chang, C. H.; Dong, J.; Li, R.; Mädler, L.; Brinker, C. J.; Nel, A. E.; Xia, T. Reduction of Acute Inflammatory Effects of Fumed Silica Nanoparticles in the Lung by Adjusting Silanol Display through Calcination and Metal Doping. *ACS Nano* 2015, Published online August 13, 2015.
2. Harper, J.C.; Carson, B.D.; Bachand, G.D.; Arndt, W.D.; Finley, M.R.; Brinker, C.J.; Edwards, T.L. Laser Machined Plastic Laminates: Towards Portable Diagnostic Devices for Use in Low Resource Environments. *Electroanalysis*, **2015**, Published online July 14, 2015.

3. Nel, A.E.; Parak, W.J.; Chan, W.C.W.; Xia, T.; Hersam, M.C.; Brinker, C.J.; Zink, J.I.; Pinkerton, K.E.; Baer, D.R.; Weiss, P.S. Where Are We Heading in Nanotechnology Environmental Health and Safety and Materials Characterization? *ACS Nano*, **2015**, 9(6), 5627-5630.
4. Johnson, P.E.; Muttill, P.; MacKenzie, D.; Carnes, E.C.; Pelowitz, J.; Mara, N.A.; Mook, W.M.; Jett, S.D.; Dunphy, D.R.; Timmins, G.S.; Brinker, C. J. Spray-Dried Multiscale Nano-biocomposites Containing Living Cells. *ACS Nano*, **2015**, 9 (7), 6961-6977
5. Dunphy, D.; Sheth, P. H.; Garcia Jr., F. L.; Brinker, C. J. Enlarged Pore Size in Mesoporous Silica Films Templated by Pluronic F127: Use of Poloxamer mixtures and increased template/SiO₂ ratios in materials synthesized by evaporation-induced self assembly. *Chemistry of Materials* **2015**, 27, 75-84.
6. Sun, J.; Jakobsson, E.; Wang, Y.; Brinker, C. J. Nanoporous Silica-Based Protocells at Multiple Scales for Designs of Life and Nanomedicine. *Life* **2015**, 5, 214-229.
7. Dobroff, A. S.; Rangel, R.; Guzman-Roja, L.; Salmeron, C. C.; Gelovani, J. G.; Sidman, R. L.; Bologna, C. G.; Oprea, T. I.; Brinker, C. J.; Pasqualini, R. Ligand-Directed Profiling of Organelles with Internalizing Phage Libraries. *Current Protocols in Protein Science* **2015**, 30.34. 31-30.34. 30.
8. Chou, S. S.; Huang, Y.-K.; Kim, J.; Kaehr, B.; Foley, B. M.; Lu, P.; Dykstra, C.; Hopkins, P. E.; Brinker, C. J.; Huang, J. Controlling the metal to semiconductor transition of MoS₂ and WS₂ in solution. *Journal of the American Chemical Society* **2015**.
9. Zhu, J.; Quan, Z.; Lin, Y. S.; Jiang, Y. B.; Wang, Z.; Zhang, J.; Jin, C.; Zhao, Y.; Liu, Z.; Brinker, C. J.; Zxu, H. Porous ice phases with VI and distorted VII structures constrained in nanoporous silica. *Nano Letters* **2014**, 14, 6554-6558.
10. Townson, J. L.; Lin, Y. S.; Chou, S. S.; Awad, Y. H.; Coker, E. N.; Brinker, C. J.; Kaehr, B. Synthetic fossilization of soft biological tissues and their shape-preserving transformation into silica or electron-conductive replicas. *Nat Comm* **2014**, 5, 5665.
11. Fu, Y.; Li, B.; Jiang, Y.-B.; Dunphy, D.; Tsai, A.; Tam, S. Y.; Fan, H. Y.; Zhang, H.; Rogers, D. M.; Rempe, S. B.; Atanassov, P.; Cecchi, J. L.; Brinker, C. J. Atomic Layer Deposition of L-Alanine Polypeptide. *Journal of the American Chemical Society* **2014**, 136, 15821-15824.
12. Li, R.; Ji, Z.; Chang, C. H.; Dunphy, D. R.; Cai, X.; Meng, H.; Zhang, H.; Sun, B.; Wang, X.; Dong, J.; Lin, S.; Wang, M.; Liao, Y.-P.; Brinker, C. J.; Nel, A. E.; Xia, T.: Surface Interactions with Compartmentalized Cellular Phosphates Explains Rare Earth Oxide Nanoparticle Hazard and Provides Opportunities for Safer Design. *ACS Nano* **2014**, 8, 1771-1783.
13. Zhou, D.; Ji, Z.; Jiang, X.; Dunphy, D.; Brinker, C. J.; Keller, A.: Influence of Material Properties on TiO₂ Nanoparticle Agglomeration. *PLoS One* **2013**, 8, e81239.
14. Xiong, S.; Dunphy, D. R.; Wilkinson, D. C.; Jiang, Z.; Strzalka, J.; Wang, J.; Su, Y.; de Pablo, J. J.; Brinker, C. J.: Revealing the Interfacial Self-Assembly Pathway of Large-Scale, Highly-Ordered, Nanoparticle/Polymer Monolayer Arrays at an Air/Water Interface. *Nano Letters* **2013**, 13, 1041-1046.
15. Townson, J. L.; Lin, Y.-S.; Agola, J. O.; Carnes, E. C.; Leong, H. S.; Lewis, J. D.; Haynes, C. L.; Brinker, C. J.: Re-examining the Size/Charge Paradigm: Differing in Vivo Characteristics of Size-

- and Charge-Matched Mesoporous Silica Nanoparticles. *Journal of the American Chemical Society* **2013**, *135*, 16030-16033.
16. Tarn, D.; Ashley, C. E.; Xue, M.; Carnes, E. C.; Zink, J. I.; Brinker, C. J.: Mesoporous Silica Nanoparticle Nanocarriers: Biofunctionality and Biocompatibility. *Accounts of Chemical Research* **2013**, *46*, 792-801.
 17. Pascal, J.; Ashley, C. E.; Wang, Z.; Brocato, T.; Butner, J.; Carnes, E. C.; Koay, E.; Brinker, C. J.; Cristini, V.: Mechanistic Modeling Identifies Drug-Uptake History as Predictor of Tumor Drug Resistance and Nano-Carrier-Mediated Response. *ACS Nano* **2013**, *7*, 11174-11182.
 18. Meng, H.; Zhao, Y.; Dong, J.; Xue, M.; Lin, Y.-S.; Ji, Z.; Mai, W. X.; Zhang, H.; Chang, C. H.; Brinker, C. J.; Zink, J. I.; Nel, A. E.: Two-Wave Nanotherapy To Target the Stroma and Optimize Gemcitabine Delivery To a Human Pancreatic Cancer Model in Mice. *ACS Nano* **2013**, *7*, 10048-10065.
 19. Kendall, E. L.; Ngassam, V. N.; Gilmore, S. F.; Brinker, C. J.; Parikh, A. N.: Lithographically Defined Macroscale Modulation of Lateral Fluidity and Phase Separation Realized via Patterned Nanoporous Silica-Supported Phospholipid Bilayers. *Journal of the American Chemical Society* **2013**, *EPub ahead of print*, 2013 Oct 10.
 20. Dengler, E. C.; Liu, J.; Kerwin, A.; Torres, S.; Olcott, C. M.; Bowman, B. N.; Armijo, L.; Gentry, K.; Wilkerson, J.; Wallace, J.; Jiang, X.; Carnes, E. C.; Brinker, C. J.; Milligan, E. D.: Mesoporous silica-supported lipid bilayers (protocells) for DNA cargo delivery to the spinal cord. *Journal of Controlled Release* **2013**, *168*, 209-224 (Cover).
 21. Chou, S. S.; Kaehr, B.; Kim, J.; Foley, B. M.; De, M.; Hopkins, P. E.; Huang, J.; Brinker, C. J.; Dravid, V. P.: Chemically exfoliated MoS₂ as near-infrared photothermal agents. *Angew Chem Int Ed Engl* **2013**, *52*, 4160-4.
 22. Brinker, C. J.; Clem, P. G.: Quartz on Silicon. *Science* **2013**, *340*, 818-819.
 23. Zhang, H.; Dunphy, D. R.; Jiang, X.; Meng, H.; Sun, B.; Tarn, D.; Xue, M.; Wang, X.; Lin, S.; Ji, Z.; Li, R.; Garcia, F. L.; Yang, J.; Kirk, M. L.; Xia, T.; Zink, J. I.; Nel, A.; Brinker, C. J.: Processing Pathway Dependence of Amorphous Silica Nanoparticle Toxicity: Colloidal vs Pyrolytic. *Journal of the American Chemical Society* **2012**, *134*, 15790-15804.
 24. Zarzar, L. D.; Swartzentruber, B. S.; Harper, J. C.; Dunphy, D. R.; Brinker, C. J.; Aizenberg, J.; Kaehr, B.: Multiphoton Lithography of Nanocrystalline Platinum and Palladium for Site-Specific Catalysis in 3D Microenvironments. *Journal of the American Chemical Society* **2012**, *134*, 4007-4010.
 25. Kaehr, B.; Townson, J. L.; Kalinich, R. M.; Awad, Y. H.; Swartzentruber, B. S.; Dunphy, D. R.; Brinker, C. J.: Cellular complexity captured in durable silica biocomposites. *Proceedings of the National Academy of Sciences* **2012**, *109*, 17336-17341 (Commentary: Ying, J.Y., Cells made of silica. *Nature Nanotechnology News & Views* **2012**, *7*, 777-778).
 26. Jiang, X.; Bao, L.; Cheng, Y.-S.; Dunphy, D. R.; Li, X.; Brinker, C. J.: Aerosol-assisted synthesis of monodisperse single-crystalline [small alpha]-cristobalite nanospheres. *Chemical Communications* **2012**, *48*, 1293-1295.
 27. Hopkins, P. E.; Kaehr, B.; Piekos, E. S.; Dunphy, D.; Brinker, C. J.: Minimum thermal conductivity considerations in aerogel thin films. *Journal of Applied Physics* **2012**, *111*, 113532-7.
 28. Harper, J. C.; Edwards, T. L.; Savage, T.; Harbaugh, S.; Kelley-Loughnane, N.; Stone, M. O.; Brinker, C. J.; Brozik, S. M.: Orthogonal Cell-Based Biosensing: Fluorescent, Electrochemical, and Colorimetric Detection with Silica-Immobilized Cellular Communities Integrated with an ITO-Glass/Plastic Laminate Cartridge. *Small* **2012**, *8*, 2743-2751 (Cover).

29. Harper, J. C.; Brozik, S. M.; Brinker, C. J.; Kaehr, B.: Biocompatible Microfabrication of 3D Isolation Chambers for Targeted Confinement of Individual Cells and Their Progeny. *Analytical Chemistry* **2012**, *84*, 8985-8989.
30. Epler, K.; Padilla, D.; Phillips, G.; Crowder, P.; Castillo, R.; Wilkinson, D.; Wilkinson, B.; Burgard, C.; Kalinich, R.; Townson, J.; Chackerian, B.; Willman, C.; Peabody, D.; Wharton, W.; Brinker, C. J.; Ashley, C.; Carnes, E.: Targeted Delivery of Protein Toxins: Delivery of Ricin Toxin A-Chain by Peptide-Targeted Mesoporous Silica Nanoparticle-Supported Lipid Bilayers (Adv. Healthcare Mater. 3/2012). *Advanced Healthcare Materials* **2012**, *1*, 241-241.
31. Brinker, C. J.: Nanoparticle immunotherapy: Combo combat. *Nat Mater* **2012**, *11*, 831-832.
32. Ashley, C. E.; Carnes, E. C.; Epler, K. E.; Padilla, D. P.; Phillips, G. K.; Castillo, R. E.; Wilkinson, D. C.; Wilkinson, B. S.; Burgard, C. A.; Kalinich, R. M.; Townson, J. L.; Chackerian, B.; Willman, C. L.; Peabody, D. S.; Wharton, W.; Brinker, C. J.: Delivery of Small Interfering RNA by Peptide-Targeted Mesoporous Silica Nanoparticle-Supported Lipid Bilayers. *ACS Nano* **2012**, *6*, 2174-2188 (COVER).
33. Zarzar, L. D.; Kim, P.; Kolle, M.; Brinker, C. J.; Aizenberg, J.; Kaehr, B.: Direct writing and actuation of three-dimensionally patterned hydrogel pads on micropillar supports. *Angew Chem Int Ed Engl* **2011**, *50*, 9356-60.
34. Xiong, S.; Molecke, R.; Bosch, M.; Schunk, P. R.; Brinker, C. J.: Transformation of a Close-Packed Au Nanoparticle/Polymer Monolayer into a Large Area Array of Oriented Au Nanowires via E-beam Promoted Uniaxial Deformation and Room Temperature Sintering. *Journal of the American Chemical Society* **2011**, *133*, 11410-11413.
35. Luk, T. S.; Xiong, S.; Chow, W. W.; Miao, X.; Subramania, G.; Resnick, P. J.; Fischer, A. J.; Brinker, C. J.: Anomalous Enhanced Emission from PbS Quantum Dots on a Photonic-Crystal Microcavity. *J. Opt. Soc. Am. B* **2011**, *28*, 1365-1373.
36. Khripin, C. Y.; Pristinski, D.; Dunphy, D. R.; Brinker, C. J.; Kaehr, B.: Protein-Directed Assembly of Arbitrary Three-Dimensional Nanoporous Silica Architectures. *ACS Nano* **2011**, *5*, 1401-1409.
37. Jiang, X.; Liu, N.; Assink, R. A.; Jiang, Y.; Brinker, C. J.: Photoresponsive release from azobenzene-modified single cubic crystal NaCl/silica particles. *J. Nanomaterials* **2011**, *2011*, 1-6.
38. Jiang, X.; Jiang, Y.-B.; Brinker, C. J.: Hydrothermal synthesis of monodisperse single-crystalline alpha-quartz nanospheres. *Chemical Communications* **2011**, *47*, 7524-7526.
39. Jiang, X.; Jiang, Y.; Liu, N.; Xu, H. F.; Rathod, S.; Shah, P.; Brinker, C. J.: Controlled release from core-shell nanoporous silica particles for corrosion inhibition of aluminum alloys. *Journal of Nanomaterials* **2011**, *2011*, 760237+.
40. Hopkins, P. E.; Kaehr, B.; Phinney, L. M.; Koehler, T. P.; Grillet, A. M.; Dunphy, D.; Garcia, F.; Brinker, C. J.: Measuring the Thermal Conductivity of Porous, Transparent SiO₂ Films With Time Domain Thermoreflectance. *J. Heat Transf.-Trans. ASME* **2011**, *133*, 061601.
41. Harper, J. C.; Lopez, D. M.; Larkin, E. C.; Economides, M. K.; McIntyre, S. K.; Alam, T. M.; Tartis, M. S.; Werner-Washburne, M.; Brinker, C. J.; Brozik, S. M.; Wheeler, D. R.: Encapsulation of *S. cerevisiae* in Poly(glycerol) Silicate Derived Matrices: Effect of Matrix Additives and Cell Metabolic Phase on Long-Term Viability and Rate of Gene Expression. *Chemistry of Materials* **2011**, *23*, 2555-2564.
42. Dunphy, D. R.; Garcia, F. L.; Kaehr, B.; Khripin, C. Y.; Collord, A. D.; Baca, H. K.; Tate, M. P.; Hillhouse, H. W.; Strzalka, J. W.; Jiang, Z.; Wang, J.; Brinker, C. J.: Tricontinuous Cubic Nanostructure and Pore Size Patterning in Mesostructured Silica Films Templated with Glycerol Monooleate. *Chemistry of Materials* **2011**, *23*, 2107-2112.

43. Dunphy, D. R.; Garcia, F. L.; Jiang, Z.; Strzalka, J.; Wang, J.; Brinker, C. J.: X-Ray characterization of self-assembled long-chain phosphatidylcholine/bile salt/silica mesostructured films with nanoscale homogeneity. *Chemical Communications* **2011**, 47, 1806-1808.
44. Baca, H. K.; Carnes, E. C.; Ashley, C. E.; Lopez, D. M.; Douthit, C.; Karlin, S.; Brinker, C. J.: Cell-directed-assembly: Directing the formation of nano/bio interfaces and architectures with living cells. *Biochimica et Biophysica Acta (BBA) - General Subjects* **2011**, 1810, 259-267.
45. Ashley, C. E.; Dunphy, D. R.; Jiang, Z.; Carnes, E. C.; Yuan, Z.; Petsev, D. N.; Atanassov, P. B.; Velev, O. D.; Sprung, M.; Wang, J.; Peabody, D. S.; Brinker, C. J.: Convective Assembly of 2D Lattices of Virus-like Particles Visualized by In-Situ Grazing-Incidence Small-Angle X-Ray Scattering. *Small* **2011**, 7, 1043-1050.
46. Ashley, C. E.; Carnes, E. C.; Phillips, G. K.; Padilla, D.; Durfee, P. N.; Brown, P. A.; Hanna, T. N.; Liu, J.; Phillips, B.; Carter, M. B.; Carroll, N. J.; Jiang, X.; Dunphy, D. R.; Willman, C. L.; Petsev, D. N.; Evans, D. G.; Parikh, A. N.; Chackerian, B.; Wharton, W.; Peabody, D. S.; Brinker, C. J.: The targeted delivery of multicomponent cargos to cancer cells by nanoporous particle-supported lipid bilayers. *Nat Mater* **2011**, 10, 389-397 (COVER).
47. Ashley, C. E.; Carnes, E. C.; Phillips, G. K.; Durfee, P. N.; Buley, M. D.; Lino, C. A.; Padilla, D. P.; Phillips, B.; Carter, M. B.; Willman, C. L.; Brinker, C. J.; Caldeira, J. d. C.; Chackerian, B.; Wharton, W.; Peabody, D. S.: Cell-Specific Delivery of Diverse Cargos by Bacteriophage MS2 Virus-like Particles. *ACS Nano* **2011**, 5, 5729-5745 (COVER).
48. J.C. Harper, C. Khirpin, E.C. Carnes, C.E. Ashley, D.M. Lopez, T. Savage, H. Jones, R. Davis, D. Nunez, L.M. Brinker, B.J. Kaehr, S. Brozik, and C.J. Brinker. Cell-Directed Integration into 3D Lipid-Silica Nanostructured Matrices, *ACS Nano*, 4 (10) 5539-5550 (2010).
49. X.M. Jiang and C. Jeffrey Brinker, Rigid templating of high surface-area, mesoporous, nanocrystalline rutile using a polyether block amide copolymer template, *Chemical Communications* 46 (33) 6123-6125 (2010)
50. Z. Chen, Y.B. Jiang, D.R. Dunphy, D.P. Adams, C. Hodges, N.G. Liu, N. Zhang, G. Xomeritakis, N.R. Aluru, S.J. Gaik, H.W. Hillhouse, and C.J. Brinker, DNA translocation through an array of kinked nanopores, *Nature Materials* 9 (8) 667-675 (Aug 2010)
51. S. Xiong, X. Miao, J. Spencer, C. Khirpin, T.S. Luk, C.J. Brinker, Integration of a Close-Packed Quantum Dot Monolayer with a Photonic-Crystal Cavity Via Interfacial Self-Assembly and Transfer, *SMALL* 6 (19) 2126-2129 (Oct 2010)..
52. X.M. Jiang, T.L. Ward, F. van Swol, and C. J. Brinker, Numerical Simulation of Ethanol-Water-NaCl Droplet Evaporation, *Industrial & Engineering Chemistry Research* 49 (12), 5631-5643 (2010).
53. B.J. Kaehr, and C. Jeffrey Brinker, Using bacterial cell growth to template catalytic asymmetry, *Chemical Communications* 46(29) 5268:5270 (2010)
54. C.Y. Khirpin, C. Jeffrey Brinker, and Bryan Kaehr, Mechanically tunable multiphoton fabricated protein hydrogels investigated using atomic force microscopy, *Soft Matter*, 6(10), 2842-2848 (2010).
55. E.L. Kendall, E. Mills, J.W. Liu, X.M. Jiang, C.J. Brinker, B.J. Kaehr, Salt-induced lipid transfer between colloidal supported lipid bilayers, *Soft Matter* 6(12) 2628-2632 (2010)

56. X.M. Jiang, T. L. Ward, Y. S. Cheng, J. W. Liu, and C. J. Brinker, Aerosol fabrication of hollow mesoporous silica nanoparticles and encapsulation of L-methionine as a candidate drug cargo, *Chemical Communications* 46 (17), 3019-3021 (2010).
57. S. Moghaddam, E. Pengwang, Y. B. Jiang, A. R. Garcia, D. J. Burnett, C. J. Brinker, R. I. Masel, and M. A. Shannon, An inorganic-organic proton exchange membrane for fuel cells with a controlled nanoscale pore structure, *Nature Nanotechnology* 5 (3) (2010), 230-236.
58. E.C. Carnes, D.M. Lopez, N.P. Donegan, A. Cheung, H. Gresham, G.S. Timmins, C.J. Brinker, Confinement-induced quorum sensing of individual *Staphylococcus aureus* bacteria, *Nature Chemical Biology* 6 (2010) 41-45 (2010)
59. L.N. Zhang, S. Singh, C.S. Tian, Y.R. Shen, Y. Wu, M.A. Shannon, C.J. Brinker, Nanoporous silica-water interfaces studied by sum-frequency vibrational spectroscopy, *Journal of Chemical Physics* 130 (15) (2009) 154702-10
60. G. Xomeritakis, C.Y. Tsai, Y.B. Jiang, C.J. Brinker, Tubular ceramic-supported sol-gel silica-based membranes for flue gas carbon dioxide capture and sequestration, *Journal of Membrane Science* 341 (2009) 30-36.
61. S.R. Taylor, G.J. Shiflet, J.R. Scully, R.G. Buchheit, W.J. van Ooij, K. Sieradzki, R.E. Diaz, C.J. Brinker, A.L. Moran, Increasing Coating Functionality Using Nanodimensioned Materials, *Nanotechnology Applications in Coatings*, American Chemical Society, Washington, DC, 2009, pp. 126-155.
62. G. Subramania, Y.J. Lee, A.J. Fischer, T.S. Luk, C.J. Brinker, D. Dunphy, Emission modification of CdSe quantum dots by titanium dioxide visible logpile photonic crystal, *Applied Physics Letters* 95(15) (2009) 151101.
63. J.W. Liu, A. Stace-Naughton, X.M. Jiang, C.J. Brinker, Porous Nanoparticle Supported Lipid Bilayers (Protocells) as Delivery Vehicles, *Journal of the American Chemical Society* 131 (2009) 1354-1355.
64. J.W. Liu, A. Stace-Naughton, C.J. Brinker, Silica nanoparticle supported lipid bilayers for gene delivery, *Chemical Communications* (2009) 5100-5102.
65. J.W. Liu, X.M. Jiang, C. Ashley, C.J. Brinker, Electrostatically Mediated Liposome Fusion and Lipid Exchange with a Nanoparticle-Supported Bilayer for Control of Surface Charge, Drug Containment, and Delivery, *Journal of the American Chemical Society* 131 (2009) 7567-+.
66. C.J. Homer, X.M. Jiang, T.L. Ward, C.J. Brinker, J.P. Reid, Measurements and simulations of the near-surface composition of evaporating ethanol-water droplets, *Physical Chemistry Chemical Physics* 11 (2009) 7780-7791.
67. D.R. Dunphy, T.M. Alam, M.P. Tate, H.W. Hillhouse, B. Smarsly, A.D. Collord, E. Carnes, H.K. Baca, R. Kohn, M. Sprung, J. Wang, C.J. Brinker, Characterization of Lipid-Templated Silica and Hybrid Thin Film Mesophases by Grazing Incidence Small-Angle X-ray Scattering, *Langmuir* 25 (2009) 9500-9509.
68. E.C. Carnes, J.C. Harper, C.E. Ashley, D.M. Lopez, L.M. Brinker, J.W. Liu, S. Singh, S.M. Brozik, C.J. Brinker, Cell-Directed Localization and Orientation of a Functional Foreign Transmembrane

- Protein within a Silica Nanostructure, *Journal of the American Chemical Society* 131 (2009) 14255-+.
69. J.B. Pang, S.S. Xiong, F. Jaeckel, Z.C. Sun, D. Dunphy, C.J. Brinker, Free-standing, patternable nanoparticle/polymer monolayer arrays formed by evaporation induced self-assembly at a fluid interface, *Journal of the American Chemical Society* 130 (2008) 3284-+.
 70. J.B. Pang, J.N. Stuecker, Y.B. Jiang, A.J. Bhakta, E.D. Branson, P. Li, J. Cesarano, D. Sutton, P. Calvert, C.J. Brinker, Directed aerosol writing of ordered silica nanostructures on arbitrary surfaces with self-assembling inks, *Small* 4 (2008) 982-989.
 71. M.H. Huang, H.M. Soyezy, B.S. Dunn, J.I. Zink, A. Sellinger, C.J. Brinker, In situ fluorescence probing of the chemical and structural changes during formation of hexagonal phase cetyltrimethylammonium bromide and lamellar phase CTAB/Poly(dodecylmethacrylate) sol-gel silica thin films, *Journal of Sol-Gel Science and Technology* 47 (2008) 300-310.
 72. D. Dunphy, H.Y. Fan, X.F. Li, J. Wang, C.J. Brinker, Dynamic investigation of gold nanocrystal assembly using in situ grazing-incidence small-angle X-ray scattering, *Langmuir* 24 (2008) 10575-10578.
 73. E. Dovgolevsky, S. Kirmayer, E. Lakin, Y. Yang, C.J. Brinker, G.L. Frey, Self-assembled conjugated polymer-surfactant-silica mesostructures and their integration into light-emitting diodes, *Journal of Materials Chemistry* 18 (2008) 423-436.
 74. R.T. Cygan, C.J. Brinker, M.D. Nyman, K. Leung, S.B. Rempe, A molecular basis for advanced materials in water treatment, *Mrs Bulletin* 33 (2008) 42-47.
 75. P.M. Barkhudarov, P.B. Shah, E.B. Watkins, D.A. Doshi, C.J. Brinker, J. Majewski, Corrosion inhibition using superhydrophobic films, *Corrosion Science* 50 (2008) 897-902.
 76. S. Yilma, N.G. Liu, A. Samoylov, T. Lo, C.J. Brinker, V. Vodyanoy, Amphotericin B channels in phospholipid membrane-coated nanoporous silicon surfaces: Implications for photovoltaic driving of ions across membranes, *Biosensors & Bioelectronics* 22 (2007) 1605-1611.
 77. S. Yilma, J. Cannon-Sykora, A. Samoylov, T. Lo, N. Liu, C.J. Brinker, W.C. Neely, V. Vodyanoy, Large-conductance cholesterol-amphotericin B channels in reconstituted lipid bilayers, *Biosensors & Bioelectronics* 22 (2007) 1359-1367.
 78. T.H. Yang, C.K. Yee, M.L. Amweg, S. Singh, E.L. Kendall, A.M. Dattelbaum, A.P. Shreve, C.J. Brinker, A.N. Parikh, Optical detection of ion-channel-induced proton transport in supported phospholipid bilayers, *Nano Letters* 7 (2007) 2446-2451.
 79. G. Xomeritakis, N.G. Liu, Z. Chen, Y.B. Jiang, R. Kohn, P.E. Johnson, C.Y. Tsai, P.B. Shah, S. Khalil, S. Singh, C.J. Brinker, Anodic alumina supported dual-layer microporous silica membranes, *Journal of Membrane Science* 287 (2007) 157-161.
 80. Y.-B. Jiang, G. Xomeritakis, Z. Chen, D. Dunphy, D.J. Kissel, J.L. Cecchi, C.J. Brinker, Sub-10 nm Thick Microporous Membranes Made by Plasma-Defined Atomic Layer Deposition of a Bridged Silsesquioxane Precursor, *Journal of the American Chemical Society* 129 (2007) 15446-15447.
 81. H.Y. Fan, C. Hartshorn, T. Buchheit, D. Tallant, R. Assink, R. Simpson, D.J. Kissel, D.J. Lacks, S.

- Torquato, C.J. Brinker, Modulus-density scaling behaviour and framework architecture of nanoporous self-assembled silicas, *Nature Materials* 6 (2007) 418-423.
82. G. De, R. Kohn, G. Xomeritakis, C.J. Brinker, Nanocrystalline mesoporous palladium activated tin oxide thin films as room-temperature hydrogen gas sensors, *Chemical Communications* (2007) 1840-1842.
 83. H.K. Baca, E. Carnes, S. Singh, C. Ashley, D. Lopez, C.J. Brinker, Cell-Directed Assembly of Bio/Nano Interfaces -- A New Scheme for Cell Immobilization, *Accounts of Chemical Research* 40 (2007) 836-845.
 84. Wright, J. Gabaldon, D.B. Burckel, Y.B. Jiang, Z.R. Tian, J. Liu, C.J. Brinker, H.Y. Fan, Hierarchically organized nanoparticle mesostructure arrays formed through hydrothermal self-assembly, *Chemistry of Materials* 18 (2006) 3034-3038.
 85. R. Truesdell, A. Mammoli, P. Vorobieff, F. van Swol, C.J. Brinker, Drag reduction on a patterned superhydrophobic surface, *Physical Review Letters* 97 (2006).
 86. S. Singh, J. Houston, F. van Swol, C.J. Brinker, Superhydrophobicity - Drying transition of confined water, *Nature* 442 (2006) 526-526.
 87. A.T. Rodriguez, M. Chen, Z. Chen, C.J. Brinker, H.Y. Fan, Nanoporous carbon nanotubes synthesized through confined hydrogen-bonding self-assembly, *Journal of the American Chemical Society* 128 (2006) 9276-9277.
 88. H.S. Peng, J. Tang, L. Yang, J.B. Pang, H.S. Ashbaugh, C.J. Brinker, Z.Z. Yang, Y.F. Lu, Responsive periodic mesoporous polydiacetylene/silica nanocomposites, *Journal of the American Chemical Society* 128 (2006) 5304-5305.
 89. J.B. Pang, L. Yang, B.F. McCaughey, H.S. Peng, H.S. Ashbaugh, C.J. Brinker, Y.F. Lu, Thermochromatism and structural evolution of metastable polydiacetylenic crystals, *Journal of Physical Chemistry B* 110 (2006) 7221-7225.
 90. J.B. Pang, L. Yang, D.A. Loy, H.S. Peng, H.S. Ashbaugh, J. Mague, C.J. Brinker, Y.F. Lu, Mesoscopically ordered organosilica and carbon-silica hybrids with uniform morphology by surfactant-assisted self-assembly of organo bis-silanetriols, *Chemical Communications* (2006) 1545-1547.
 91. S.J. Kwoun, R.M. Lec, R.A. Cairncross, P. Shah, C.J. Brinker, Characterization of superhydrophobic materials using multiresonance acoustic shear wave sensors, *Ieee Transactions on Ultrasonics Ferroelectrics and Frequency Control* 53 (2006) 1400-1403.
 92. Y.B. Jiang, N.G. Liu, H. Gerung, J.L. Cecchi, C.J. Brinker, Nanometer-thick conformal pore sealing of self-assembled mesoporous silica by plasma-assisted atomic layer deposition, *Journal of the American Chemical Society* 128 (2006) 11018-11019.
 93. X.M. Jiang, C.J. Brinker, Aerosol-assisted self-assembly of single-crystal core/nanoporous shell particles as model controlled release capsules, *Journal of the American Chemical Society* 128 (2006) 4512-4513.
 94. H. Gerung, Y. Zhao, L. Wang, R.K. Jain, T.J. Boyle, C.J. Brinker, S.M. Han, Two-photon absorption

- of matrix-free Ge nanocrystals, *Applied Physics Letters* 89 (2006).
95. H. Gerung, T.J. Boyle, L.J. Tribby, S.D. Bunge, C.J. Brinker, S.M. Han, Solution synthesis of germanium nanowires using a Ge²⁺ alkoxide precursor, *Journal of the American Chemical Society* 128 (2006) 5244-5250.
 96. H.Y. Fan, A. Wright, J. Gabaldon, A. Rodriguez, C.J. Brinker, Y.B. Jiang, Three-dimensionally ordered gold nanocrystal/silica superlattice thin films synthesized via sol-gel self-assembly, *Advanced Functional Materials* 16 (2006) 891-895.
 97. H.Y. Fan, J. Gabaldon, C.J. Brinker, Y.B. Jiang, Ordered nanocrystal/silica particles self-assembled from nanocrystal micelles and silicate, *Chemical Communications* (2006) 2323-2325.
 98. C.J. Brinker, D.R. Dunphy, Morphological control of surfactant-templated metal oxide films, *Current Opinion in Colloid & Interface Science* 11 (2006) 126-132.
 99. H.K. Baca, C. Ashley, E. Carnes, D. Lopez, J. Flemming, D. Dunphy, S. Singh, Z. Chen, N.G. Liu, H.Y. Fan, G.P. Lopez, S.M. Brozik, M. Werner-Washburne, C.J. Brinker, Cell-directed assembly of lipid-silica nanostructures providing extended cell viability, *Science* 313 (2006) 337-341.
 100. D. Yu, J. Volponi, S. Chhabra, C.J. Brinker, A. Mulchandani, A.K. Singh, Aqueous sol-gel encapsulation of genetically engineered *Moraxella* spp. cells for the detection of organophosphates, *Biosensors & Bioelectronics* 20 (2005) 1433-1437.
 101. K. Yang, H.Y. Fan, K.J. Malloy, C.J. Brinker, T.W. Sigmon, Optical and electrical properties of self-assembled, ordered gold nanocrystal/silica thin films prepared by sol-gel processing, *Thin Solid Films* 491 (2005) 38-42.
 102. G. Xomeritakis, C.Y. Tsai, C.J. Brinker, Microporous sol-gel derived aminosilicate membrane for enhanced carbon dioxide separation, *Separation and Purification Technology* 42 (2005) 249-257.
 103. S. Torquato, A. Donev, A.G. Evans, C.J. Brinker, Manufacturable extremal low-dielectric, high-stiffness porous materials, *Journal of Applied Physics* 97 (2005).
 104. B. Smarsly, A. Gibaud, W. Ruland, D. Sturmayr, C.J. Brinker, Quantitative SAXS analysis of oriented 2D hexagonal cylindrical silica mesostructures in thin films obtained from nonionic surfactants, *Langmuir* 21 (2005) 3858-3866.
 105. H.S. Peng, J. Tang, J.B. Pang, D.Y. Chen, L. Yang, H.S. Ashbaugh, C.J. Brinker, Z.Z. Yang, Y.F. Lu, Polydiacetylene/silica nanocomposites with tunable mesostructure and thermochromatism from diacetylenic assembling molecules, *Journal of the American Chemical Society* 127 (2005) 12782-12783.
 106. M. Nyman, D. Ingersoll, S. Singh, F. Bonhomme, T.M. Alam, C.J. Brinker, M.A. Rodriguez, Comparative study of inorganic cluster-surfactant arrays, *Chemistry of Materials* 17 (2005) 2885-2895.
 107. S. Gogte, P. Vorobieff, R. Truesdell, A. Mammoli, F. van Swol, P. Shah, C.J. Brinker, Effective slip on textured superhydrophobic surfaces, *Physics of Fluids* 17 (2005).
 108. H. Gerung, S.D. Bunge, T.J. Boyle, C.J. Brinker, S.M. Han, Anhydrous solution synthesis of

- germanium nanocrystals from the germanium(II) precursor $\text{Ge}[\text{N}(\text{SiMe}_3)_2]_2$, *Chemical Communications* (2005) 1914-1916.
109. H. Gerung, C.J. Brinker, S.R.J. Brueck, S.M. Han, In situ real-time monitoring of profile evolution during plasma etching of mesoporous low-dielectric-constant SiO_2 , *Journal of Vacuum Science & Technology A* 23 (2005) 347-354.
 110. H.Y. Fan, E.W. Leve, C. Scullin, J. Gabaldon, D. Tallant, S. Bunge, T. Boyle, M.C. Wilson, C.J. Brinker, Surfactant-assisted synthesis of water-soluble and biocompatible semiconductor quantum dot micelles, *Nano Letters* 5 (2005) 645-648.
 111. H.Y. Fan, E. Leve, J. Gabaldon, A. Wright, R.E. Haddad, C.J. Brinker, Ordered two- and three-dimensional arrays self-assembled from water-soluble nanocrystal-micelles, *Advanced Materials* 17 (2005) 2587-+.
 112. H.Y. Fan, Z. Chen, C.J. Brinker, J. Clawson, T. Alam, Synthesis of organo-silane functionalized nanocrystal micelles and their self-assembly, *Journal of the American Chemical Society* 127 (2005) 13746-13747.
 113. D.A. Doshi, P.B. Shah, S. Singh, E.D. Branson, A.P. Malanoski, E.B. Watkins, J. Majewski, F. van Swol, C.J. Brinker, Investigating the interface of superhydrophobic surfaces in contact with water, *Langmuir* 21 (2005) 7805-7811.
 114. D.A. Doshi, A.M. Dattelbaum, E.B. Watkins, C.J. Brinker, B.I. Swanson, A.P. Shreve, A.N. Parikh, J. Majewski, Neutron reflectivity study of lipid membranes assembled on ordered nanocomposite and nanoporous silica thin films, *Langmuir* 21 (2005) 2865-2870.
 115. Z.P. Xu, P.S. Braterman, K. Yu, H.F. Xu, Y.F. Wang, C.J. Brinker, Unusual hydrocarbon chain packing mode and modification of crystallite growth habit in the self-assembled nanocomposites zinc-aluminum-hydroxide oleate and elaidate (cis- and trans- $[\text{Zn}_2\text{Al}(\text{OH})_6(\text{CH}_3(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_7\text{COO}-)]$) and magnesium analogues, *Chemistry of Materials* 16 (2004) 2750-2756.
 116. D.H. Wang, H.M. Luo, R. Kou, M.P. Gil, S.G. Xiao, V.O. Golub, Z.Z. Yang, C.J. Brinker, Y.F. Lu, A general route to macroscopic hierarchical 3D nanowire networks, *Angewandte Chemie-International Edition* 43 (2004) 6169-6173.
 117. Y.J. Song, Y. Yang, C.J. Medforth, E. Pereira, A.K. Singh, H.F. Xu, Y.B. Jiang, C.J. Brinker, F. van Swol, J.A. Shelnutt, Controlled synthesis of 2-D and 3-D dendritic platinum nanostructures, *Journal of the American Chemical Society* 126 (2004) 635-645.
 118. N.G. Liu, D.R. Dunphy, P. Atanassov, S.D. Bunge, Z. Chen, G.P. Lopez, T.J. Boyle, C.J. Brinker, Photoregulation of mass transport through a photoresponsive azobenzene-modified nanoporous membrane, *Nano Letters* 4 (2004) 551-554.
 119. G. Garnweitner, B. Smarsly, R. Assink, D.R. Dunphy, C. Scullin, C.J. Brinker, Characterization of self-assembled lamellar thermoresponsive silica-hydrogel nanocomposite films, *Langmuir* 20 (2004) 9811-9820.
 120. H.Y. Fan, K. Yang, D.M. Boye, T. Sigmon, K.J. Malloy, H.F. Xu, G.P. Lopez, C.J. Brinker, Self-assembly of ordered, robust, three-dimensional gold nanocrystal/silica arrays, *Science* 304 (2004)

567-571.

121. C.J. Brinker, Evaporation-induced self-assembly: Functional nanostructures made easy, *Mrs Bulletin* 29 (2004) 631-640.
122. K. Yu, X. Wu, C.J. Brinker, J. Ripmeester, Mesostructured MTES-derived silica thin film with spherical voids investigated by TEM: 1. Mesostructure determination, *Langmuir* 19 (2003) 7282-7288.
123. K. Yu, B. Smarsly, C.J. Brinker, Self-assembly and characterization of mesostructured silica films with a 3D arrangement of isolated spherical mesopores, *Advanced Functional Materials* 13 (2003) 47-52.
124. S. Yilma, J.C. Sykora, T.T. Lo, A.M. Samoylov, N. Viswaprakash, N. Liu, T.A. Roppel, W.C. Neely, C.J. Brinker, V.J. Vodyanoy, Photovoltaic driving of current through amphotericin B/cholesterol channels, *Biophysical Journal* 84 (2003) 51A-51A.
125. Y. Yang, Y.F. Lu, M.C. Lu, J.M. Huang, R. Haddad, G. Xomeritakis, N.G. Liu, A.P. Malanoski, D. Sturmayer, H.Y. Fan, D.Y. Sasaki, R.A. Assink, J.A. Shelnett, F. van Swol, G.P. Lopez, A.R. Burns, C.J. Brinker, Functional nanocomposites prepared by self-assembly and polymerization of diacetylene surfactants and silicic acid, *Journal of the American Chemical Society* 125 (2003) 1269-1277.
126. G. Xomeritakis, S. Naik, C.M. Braunbarth, C.J. Cornelius, R. Pardey, C.J. Brinker, Organic-templated silica membranes - I. Gas and vapor transport properties, *Journal of Membrane Science* 215 (2003) 225-233.
127. G. Xomeritakis, C.M. Braunbarth, B. Smarsly, N. Liu, R. Kohn, Z. Klipowicz, C.J. Brinker, Aerosol-assisted deposition of surfactant-templated mesoporous silica membranes on porous ceramic supports, *Microporous and Mesoporous Materials* 66 (2003) 91-101.
128. X. Wu, K. Yu, C.J. Brinker, J. Ripmeester, Mesostructured MTES-derived silica thin film with spherical voids investigated by TEM: 2. Dislocations and strain relaxation, *Langmuir* 19 (2003) 7289-7294.
129. D.H. Wang, W.L. Zhou, B.F. McCaughy, J.E. Hampsey, X.L. Ji, Y.B. Jiang, H.F. Xu, J.K. Tang, R.H. Schmehl, C. O'Connor, C.J. Brinker, Y.F. Lu, Electrodeposition of metallic nanowire thin films using mesoporous silica templates, *Advanced Materials* 15 (2003) 130-+.
130. B. Smarsly, K. Yu, C.J. Brinker, Detailed investigation of the microporous character of mesoporous silicas as revealed by small-angle scattering techniques, in: S.E. Park, R. Ryoo, W.S. Ahn, C.W. Lee, J.S. Chang (Eds.), *Nanotechnology in Mesostructured Materials*, vol. 146, 2003, pp. 295-298.
131. B. Smarsly, G. Xomeritakis, K. Yu, N.G. Liu, H.Y. Fan, R.A. Assink, C.A. Drewien, W. Ruland, C.J. Brinker, Microstructural characterization of polystyrene-block-poly(ethylene oxide)-templated silica films with cubic-ordered spherical mesopores, *Langmuir* 19 (2003) 7295-7301.
132. B. Smarsly, G. Garnweitner, R. Assink, C.J. Brinker, Preparation and characterization of mesostructured polymer-functionalized sol-gel-derived thin films, *Progress in Organic Coatings* 47 (2003) 393-400.

133. B. McCaughey, C. Costello, D.H. Wang, J.E. Hampsey, Z.Z. Yang, C.J. Li, C.J. Brinker, Y.F. Lu, Self-assembly of mesostructured conjugated poly(2,5-thienylene ethynylene)/silica nanocomposites, *Advanced Materials* 15 (2003) 1266-+.
134. Y.F. Lu, B.F. McCaughey, D.H. Wang, J.E. Hampsey, N. Doke, Z.Z. Yang, C.J. Brinker, Aerosol-assisted formation of mesostructured thin films, *Advanced Materials* 15 (2003) 1733-+.
135. N.G. Liu, Z. Chen, D.R. Dunphy, Y.B. Jiang, R.A. Assink, C.J. Brinker, Photoresponsive nanocomposite formed by self-assembly of an azobenzene-modified silane, *Angewandte Chemie-International Edition* 42 (2003) 1731-1734.
136. N.G. Liu, R.A. Assink, B. Smarsly, C.J. Brinker, Synthesis and characterization of highly ordered functional mesoporous silica thin films with positively chargeable -NH₂ groups, *Chemical Communications* (2003) 1146-1147.
137. N.G. Liu, R.A. Assink, C.J. Brinker, Synthesis and characterization of highly ordered mesoporous thin films with -COOH terminated pore surfaces, *Chemical Communications* (2003) 370-371.
138. Gibaud, D. Grosso, B. Smarsly, A. Baptiste, J.F. Bardeau, F. Babonneau, D.A. Doshi, Z. Chen, C.J. Brinker, C. Sanchez, Evaporation-controlled self-assembly of silica surfactant mesophases, *Journal of Physical Chemistry B* 107 (2003) 6114-6118.
139. Gibaud, D. Doshi, B. Ocko, V. Goletto, C.J. Brinker, Time-resolved in situ grazing incidence small angle x-ray scattering experiment of evaporation induced self-assembly, in: S.E. Park, R. Ryoo, W.S. Ahn, C.W. Lee, J.S. Chang (Eds.), *Nanotechnology in Mesostructured Materials*, vol. 146, 2003, pp. 351-354.
140. Gibaud, A. Baptiste, D.A. Doshi, C.J. Brinker, L. Yang, B. Ocko, Wall thickness and core radius determination in surfactant templated silica thin films using GISAXS and X-ray reflectivity, *Europhysics Letters* 63 (2003) 833-839.
141. G. Garnweitner, B. Smarsly, R. Assink, W. Ruland, E. Bond, C.J. Brinker, Self-assembly of an environmentally responsive polymer/silica nanocomposite, *Journal of the American Chemical Society* 125 (2003) 5626-5627.
142. D.R. Dunphy, S. Singer, A.W. Cook, B. Smarsly, D.A. Doshi, C.J. Brinker, Aqueous stability of mesoporous silica films doped or grafted with aluminum oxide, *Langmuir* 19 (2003) 10403-10408.
143. D.A. Doshi, A. Gibaud, N.G. Liu, D. Sturmayer, A.P. Malanoski, D.R. Dunphy, H.J. Chen, S. Narayanan, A. MacPhee, J. Wang, S.T. Reed, A.J. Hurd, F. van Swol, C.J. Brinker, In-situ X-ray scattering study of continuous silica-surfactant self-assembly during steady-state dip coating, *Journal of Physical Chemistry B* 107 (2003) 7683-7688.
144. D.A. Doshi, A. Gibaud, V. Goletto, M.C. Lu, H. Gerung, B. Ocko, S.M. Han, C.J. Brinker, Peering into the self-assembly of surfactant templated thin-film silica mesophases, *Journal of the American Chemical Society* 125 (2003) 11646-11655.
145. Y.F. Wang, C. Bryan, H.F. Xu, P. Pohl, Y. Yang, C.J. Brinker, Interface chemistry of nanostructured materials: Ion adsorption on mesoporous alumina, *Journal of Colloid and Interface*

- Science 254 (2002) 23-30.
146. T.T. Lo, T.A. Roppel, J.J. Cannon, S. Yilma, A.M. Samoylov, W.C. Neely, N.G. Liu, C.J. Brinker, V.J. Vodyanoy, Large amphotericin B/cholesterol ion channels, *Biophysical Journal* 82 (2002) 2711.
 147. N.G. Liu, K. Yu, B. Smarsly, D.R. Dunphy, Y.B. Jiang, C.J. Brinker, Self-directed assembly of photoactive hybrid silicates derived from an azobenzene-bridged silsesquioxane, *Journal of the American Chemical Society* 124 (2002) 14540-14541.
 148. K. Yu, A.J. Hurd, A. Eisenberg, C.J. Brinker, Syntheses of silica/polystyrene-block-poly(ethylene oxide) films with regular and reverse mesostructures of large characteristic length scales by solvent evaporation-induced self-assembly, *Langmuir* 17 (2001) 7961-7965.
 149. Y.F. Lu, Y. Yang, A. Sellinger, M.C. Lu, J.M. Huang, H.Y. Fan, R. Haddad, G. Lopez, A.R. Burns, D.Y. Sasaki, J. Shelnett, C.J. Brinker, Self-assembly of mesoscopically ordered chromatic polydiacetylene/silica nanocomposites, *Nature* 410 (2001) 913-917.
 150. S.L. Hietala, V.M. Hietala, C.J. Brinker, Dual SAW sensor technique for determining mass and modulus changes, *Ieee Transactions on Ultrasonics Ferroelectrics and Frequency Control* 48 (2001) 262-267.
 151. H.Y. Fan, F. Van Swol, Y.F. Lu, C.J. Brinker, Multiphased assembly of nanoporous silica particles, *Journal of Non-Crystalline Solids* 285 (2001) 71-78.
 152. H.Y. Fan, S. Reed, T. Baer, R. Schunk, G.P. Lopez, C.J. Brinker, Hierarchically structured functional porous silica and composite produced by evaporation-induced self-assembly, *Microporous and Mesoporous Materials* 44 (2001) 625-637.
 153. H.Y. Fan, H.R. Bentley, K.R. Kathan, P. Clem, Y.F. Lu, C.J. Brinker, Self-assembled aerogel-like low dielectric constant films, *Journal of Non-Crystalline Solids* 285 (2001) 79-83.
 154. C.Y. Tsai, S.Y. Tam, Y.F. Lu, C.J. Brinker, Dual-layer asymmetric microporous silica membranes, *Journal of Membrane Science* 169 (2000) 255-268.
 155. Y.F. Lu, H.Y. Fan, N. Doke, D.A. Loy, R.A. Assink, D.A. LaVan, C.J. Brinker, Evaporation-induced self-assembly of hybrid bridged silsesquioxane film and particulate mesophases with integral organic functionality, *Journal of the American Chemical Society* 122 (2000) 5258-5261.
 156. H.Y. Fan, Y.F. Lu, A. Stump, S.T. Reed, T. Baer, R. Schunk, V. Perez-Luna, G.P. Lopez, C.J. Brinker, Rapid prototyping of patterned functional nanostructures, *Nature* 405 (2000) 56-60.
 157. D.A. Doshi, N.K. Huesing, M.C. Lu, H.Y. Fan, Y.F. Lu, K. Simmons-Potter, B.G. Potter, A.J. Hurd, C.J. Brinker, Optically, defined multifunctional patterning of photosensitive thin-film silica mesophases, *Science* 290 (2000) 107-111.
 158. C.A. Click, R.A. Assink, C.J. Brinker, S.J. Naik, An investigation of molecular templating in amorphous silicas by cross-polarization NMR spectroscopy, *Journal of Physical Chemistry B* 104 (2000) 233-236.
 159. T. Clark, J.D. Ruiz, H.Y. Fan, C.J. Brinker, B.I. Swanson, A.N. Parikh, A new application of

- UV-ozone treatment in the preparation of substrate-supported, mesoporous thin films, *Chemistry of Materials* 12 (2000) 3879-3884.
160. R.B. Bhatia, C.J. Brinker, A.K. Gupta, A.K. Singh, Aqueous sol-gel process for protein encapsulation, *Chemistry of Materials* 12 (2000) 2434-2441.
 161. Y.F. Lu, H.Y. Fan, A. Stump, T.L. Ward, T. Rieker, C.J. Brinker, Aerosol-assisted self-assembly of mesostructured spherical nanoparticles, *Nature* 398 (1999) 223-226.
 162. Y.F. Lu, G.Z. Cao, R.P. Kale, S. Prabakar, G.P. Lopez, C.J. Brinker, Microporous silica prepared by organic templating: Relationship between the molecular template and pore structure, *Chemistry of Materials* 11 (1999) 1223-1229.
 163. C.J. Brinker, Y.F. Lu, A. Sellinger, H.Y. Fan, Evaporation-induced self-assembly: Nanostructures made easy, *Advanced Materials* 11 (1999) 579-+.
 164. T.J. Boyle, C.J. Brinker, T.J. Gardner, A.G. Sault, R.C. Hughes, Catalytic membrane sensors. A thin film modified H-2 resistive sensor for multi-molecular detection, *Comments on Inorganic Chemistry* 20 (1999) 209-231.
 165. Sellinger, P.M. Weiss, A. Nguyen, Y.F. Lu, R.A. Assink, W.L. Gong, C.J. Brinker, Continuous self-assembly of organic-inorganic nanocomposite coatings that mimic nacre, *Nature* 394 (1998) 256-260.
 166. Samuel, C.J. Brinker, L.J.D. Frink, F. van Swol, Direct measurement of solvation forces in complex microporous media: A new characterization tool, *Langmuir* 14 (1998) 2602-2605.
 167. J.A. Ruffner, P.G. Clem, B.A. Tuttle, C.J. Brinker, C.S. Sriram, J.A. Bullington, Uncooled thin film infrared imaging device with aerogel thermal isolation: deposition and planarization techniques, *Thin Solid Films* 332 (1998) 356-361.
 168. C.J. Brinker, Oriented inorganic films, *Current Opinion in Colloid & Interface Science* 3 (1998) 166-173.
 169. S.M. Rao, C.S. Scotto, C.J. Brinker, T.J. Ross, Development of surface-specific, anti-weathering stone preservation treatment, *International Series on Advances in Architecture* 3 (1997) 233.
 170. Y.F. Lu, R. Ganguli, C.A. Drewien, M.T. Anderson, C.J. Brinker, W.L. Gong, Y.X. Guo, H. Soyez, B. Dunn, M.H. Huang, J.I. Zink, Continuous formation of supported cubic and hexagonal mesoporous films by sol gel dip-coating, *Nature* 389 (1997) 364-368.
 171. R.A. Cairncross, P.R. Schunk, K.S. Chen, S.S. Prakash, J. Samuel, A.J. Hurd, C.J. Brinker, Pore evolution and solvent transport during drying of gelled sol-gel coatings: Predicting 'springback', *Drying Technology* 15 (1997) 1815-1825.
 172. S.M. Rao, C.J. Brinker, T.J. Ross, Environmental microscopy in stone conservation, *Scanning* 18 (1996) 508-514.
 173. N.K. Raman, M.T. Anderson, C.J. Brinker, Template-based approaches to the preparation of amorphous, nanoporous silicas, *Chemistry of Materials* 8 (1996) 1682-1701.

174. S. Prabakar, R.A. Assink, N.K. Raman, S.A. Myers, C.J. Brinker, Identification of self- and cross-condensation products in organically modified silica sols by Si-29 and O-17 NMR spectroscopy, *Journal of Non-Crystalline Solids* 202 (1996) 53-60.
175. J.P. Collins, R.W. Schwartz, R. Sehgal, T.L. Ward, C.J. Brinker, G.P. Hagen, C.A. Udovich, Catalytic dehydrogenation of propane in hydrogen permselective membrane reactors, *Industrial & Engineering Chemistry Research* 35 (1996) 4398-4405.
176. G.Z. Cao, Y.F. Lu, L. Delattre, C.J. Brinker, G.P. Lopez, Amorphous silica molecular sieving membranes by sol-gel processing, *Advanced Materials* 8 (1996) 588-&.
177. C.J. Brinker, Porous inorganic materials, *Current Opinion in Solid State & Materials Science* 1 (1996) 798-805.
178. N.K. Raman, C.J. Brinker, Organic template approach to molecular-sieving membranes, *Journal of Membrane Science* 105 (1995) 273-279.
179. S.S. Prakash, C.J. Brinker, A.J. Hurd, S.M. Rao, SILICA AEROGEL FILMS PREPARED AT AMBIENT-PRESSURE BY USING SURFACE DERIVATIZATION TO INDUCE REVERSIBLE DRYING SHRINKAGE, *Nature* 374 (1995) 439-443.
180. S.S. Prakash, C.J. Brinker, A.J. Hurd, SILICA AEROGEL FILMS AT AMBIENT-PRESSURE, *Journal of Non-Crystalline Solids* 190 (1995) 264-275.
181. F. Nishida, J.M. McKiernan, B. Dunn, J.I. Zink, C.J. Brinker, A.J. Hurd, IN-SITU FLUORESCENCE PROBING OF THE CHEMICAL-CHANGES DURING SOL-GEL THIN-FILM FORMATION, *Journal of the American Ceramic Society* 78 (1995) 1640-1648.
182. C.J. Brinker, N.K. Raman, M.N. Logan, R. Sehgal, R.A. Assink, D.W. Hua, T.L. Ward, STRUCTURE-PROPERTY RELATIONSHIPS IN THIN-FILMS AND MEMBRANES, *Journal of Sol-Gel Science and Technology* 4 (1995) 117-133.
183. P.J. Davis, R. Deshpande, D.M. Smith, C.J. Brinker, R.A. Assink, PORE STRUCTURE EVOLUTION IN SILICA-GEL DURING AGING/DRYING .4. VARYING PORE FLUID PH, *Journal of Non-Crystalline Solids* 167 (1994) 295-306.
184. C.J. Brinker, R. Sehgal, S.L. Hietala, R. Deshpande, D.M. Smith, D. Loy, C.S. Ashley, SOL-GEL STRATEGIES FOR CONTROLLED POROSITY INORGANIC MATERIALS, *Journal of Membrane Science* 94 (1994) 85-102.
185. C.J. Brinker, A.J. Hurd, FUNDAMENTALS OF SOL-GEL DIP-COATING, *Journal De Physique Iii* 4 (1994) 1231-1242.
186. N.K. Raman, T.L. Ward, C.J. Brinker, R. Sehgal, D.M. Smith, Z. Duan, M. Hampdensmith, J.K. Bailey, T.J. Headley, CATALYST DISPERSION ON SUPPORTED ULTRAMICROPOROUS INORGANIC MEMBRANES USING DERIVATIZED SILYLATION AGENTS, *Applied Catalysis a-General* 96 (1993) 65-82.
187. S.L. Hietala, D.M. Smith, V.M. Hietala, C.J. Brinker, CLOSED POROSITY ALUMINOSILICATE FOR ELECTRONIC PACKAGING APPLICATIONS, *Journal of Materials*

- Research 8 (1993) 1122-1127.
188. C.J. Brinker, T.L. Ward, R. Sehgal, N.K. Raman, S.L. Hietala, D.M. Smith, D.W. Hua, T.J. Headley, ULTRAMICROPOROUS SILICA-BASED SUPPORTED INORGANIC MEMBRANES, *Journal of Membrane Science* 77 (1993) 165-179.
189. J.K. Bailey, C.J. Brinker, M.L. Mecartney, GROWTH MECHANISMS OF IRON-OXIDE PARTICLES OF DIFFERING MORPHOLOGIES FROM THE FORCED HYDROLYSIS OF FERRIC-CHLORIDE SOLUTIONS, *Journal of Colloid and Interface Science* 157 (1993) 1-13.
190. W.C. Ackerman, D.M. Smith, J.C. Huling, Y.W. Kim, J.K. Bailey, C.J. Brinker, GAS VAPOR ADSORPTION IN IMOGOLITE - A MICROPOROUS TUBULAR ALUMINOSILICATE, *Langmuir* 9 (1993) 1051-1057.
191. Y. Zhang, N. Raman, J.K. Bailey, C.J. Brinker, R.M. Crooks, A NEW SOL-GEL ROUTE FOR THE PREPARATION OF NANOMETER-SCALE SEMICONDUCTOR PARTICLES THAT EXHIBIT QUANTUM OPTICAL BEHAVIOR, *Journal of Physical Chemistry* 96 (1992) 9098-9100.
192. D.M. Smith, R. Deshpande, C.J. Brinker, W.L. Earl, B. Ewing, P.J. Davis, INSITU PORE STRUCTURE CHARACTERIZATION DURING SOL-GEL SYNTHESIS OF CONTROLLED POROSITY MATERIALS, *Catalysis Today* 14 (1992) 293-303.
193. M.J. Hampdensmith, T.A. Wark, C.J. Brinker, THE SOLID-STATE AND SOLUTION STRUCTURES OF TIN(IV) ALKOXIDE COMPOUNDS AND THEIR USE AS PRECURSORS TO FORM TIN OXIDE CERAMICS VIA SOL GEL-TYPE HYDROLYSIS AND CONDENSATION, *Coordination Chemistry Reviews* 112 (1992) 81-116.
194. R. Deshpande, D.W. Hua, D.M. Smith, C.J. Brinker, PORE STRUCTURE EVOLUTION IN SILICA-GEL DURING AGING DRYING .3. EFFECTS OF SURFACE-TENSION, *Journal of Non-Crystalline Solids* 144 (1992) 32-44.
195. P.J. Davis, C.J. Brinker, D.M. Smith, R.A. Assink, PORE STRUCTURE EVOLUTION IN SILICA-GEL DURING AGING DRYING .2. EFFECT OF PORE FLUIDS, *Journal of Non-Crystalline Solids* 142 (1992) 197-207.
196. P.J. Davis, C.J. Brinker, D.M. Smith, PORE STRUCTURE EVOLUTION IN SILICA-GEL DURING AGING DRYING .1. TEMPORAL AND THERMAL AGING, *Journal of Non-Crystalline Solids* 142 (1992) 189-196.
197. C.J. Brinker, D.M. Smith, R. Deshpande, P.M. Davis, S. Hietala, G.C. Frye, C.S. Ashley, R.A. Assink, SOL-GEL PROCESSING OF CONTROLLED PORE OXIDES, *Catalysis Today* 14 (1992) 155-163.
198. C.J. Brinker, A.J. Hurd, P.R. Schunk, G.C. Frye, C.S. Ashley, REVIEW OF SOL-GEL THIN-FILM FORMATION, *Journal of Non-Crystalline Solids* 147 (1992) 424-436.
199. W.L. Warren, P.M. Lenahan, C.J. Brinker, C.S. Ashley, S.T. Reed, G.R. Shaffer, SOL-GEL SILICATE THIN-FILM ELECTRONIC-PROPERTIES, *Journal of Applied Physics* 69 (1991) 4404-4408.
200. W.L. Warren, P.M. Lenahan, C.J. Brinker, RELATIONSHIP BETWEEN STRAINED

- SILICON-OXYGEN BONDS AND RADIATION-INDUCED PARAMAGNETIC POINT-DEFECTS IN SILICON DIOXIDE, *Solid State Communications* 79 (1991) 137-141.
201. W.L. Warren, P.M. Lenahan, C.J. Brinker, EXPERIMENTAL-EVIDENCE FOR 2 FUNDAMENTALLY DIFFERENT E' PRECURSORS IN AMORPHOUS-SILICON DIOXIDE, *Journal of Non-Crystalline Solids* 136 (1991) 151-162.
202. W.G. Fahrenholtz, S.L. Hietala, P. Newcomer, N.R. Dando, D.M. Smith, C.J. Brinker, EFFECT OF PHYSICAL STRUCTURE ON THE PHASE DEVELOPMENT OF ALUMINOSILICATE GELS, *Journal of the American Ceramic Society* 74 (1991) 2393-2397.
203. C.J. Brinker, A.J. Hurd, G.C. Frye, P.R. Schunk, C.S. Ashley, SOL-GEL THIN-FILM FORMATION, *Nippon Seramikkusu Kyokai Gakujutsu Ronbunshi-Journal of the Ceramic Society of Japan* 99 (1991) 862-877.
204. C.J. Brinker, G.C. Frye, A.J. Hurd, C.S. Ashley, FUNDAMENTALS OF SOL-GEL DIP COATING, *Thin Solid Films* 201 (1991) 97-108.
205. W.L. Warren, P.M. Lenahan, C.J. Brinker, C.S. Ashley, S.T. Reed, DEPOSITION OF HIGH-QUALITY SOL-GEL OXIDES ON SILICON, *Journal of Electronic Materials* 19 (1990) 425-428.
206. D.W. Schaefer, C.J. Brinker, D. Richter, B. Farago, B. Frick, DYNAMICS OF WEAKLY CONNECTED SOLIDS - SILICA AEROGELS, *Physical Review Letters* 64 (1990) 2316-2319.
207. S.L. Hietala, D.M. Smith, C.J. Brinker, A.J. Hurd, A.H. Carim, N. Dando, STRUCTURAL STUDIES OF ANOMALOUS BEHAVIOR IN THE SILICA-ALUMINA GEL SYSTEM, *Journal of the American Ceramic Society* 73 (1990) 2815-2821.
208. C.J. Brinker, A.J. Hurd, G.C. Frye, K.J. Ward, C.S. Ashley, SOL-GEL THIN-FILM FORMATION, *Journal of Non-Crystalline Solids* 121 (1990) 294-302.
209. C.J. Brinker, R.K. Brow, D.R. Tallant, R.J. Kirkpatrick, SURFACE-STRUCTURE AND CHEMISTRY OF HIGH SURFACE-AREA SILICA-GELS, *Journal of Non-Crystalline Solids* 120 (1990) 26-33.
210. D.M. Smith, C.L. Glaves, D.P. Gallegos, C.J. Brinker, PORE STRUCTURE CHARACTERIZATION OF CATALYST SUPPORTS VIA LOW-FIELD NMR-SPECTROSCOPY, *ACS Symposium Series* 411 (1989) 251-261.
211. S.L. Hietala, D.M. Smith, J.L. Golden, C.J. Brinker, ANOMALOUSLY LOW SURFACE-AREA AND DENSITY IN THE SILICA-ALUMINA GEL SYSTEM, *Journal of the American Ceramic Society* 72 (1989) 2354-2358.
212. C.L. Glaves, G.C. Frye, D.M. Smith, C.J. Brinker, A. Datye, A.J. Ricco, S.J. Martin, PORE STRUCTURE CHARACTERIZATION OF POROUS FILMS, *Langmuir* 5 (1989) 459-466.
213. G.C. Frye, S.J. Martin, A.J. Ricco, C.J. Brinker, MONITORING THIN-FILM PROPERTIES WITH SURFACE ACOUSTIC-WAVE DEVICES - DIFFUSION, SURFACE-AREA, AND PORE-SIZE DISTRIBUTION, *Acs Symposium Series* 403 (1989) 208-221.
214. C.J. Brinker, R.A. Assink, SPINNABILITY OF SILICA SOLS - STRUCTURAL AND

- RHEOLOGICAL CRITERIA, *Journal of Non-Crystalline Solids* 111 (1989) 48-54.
215. T. Bein, K. Brown, G.C. Frye, C.J. Brinker, MOLECULAR-SIEVE SENSORS FOR SELECTIVE DETECTION AT THE NANOGRAM LEVEL, *Journal of the American Chemical Society* 111 (1989) 7640-7641.
216. A.J. Hurd, C.J. Brinker, OPTICAL SOL-GEL COATINGS - ELLIPSOMETRY OF FILM FORMATION, *Journal De Physique* 49 (1988) 1017-1025.
217. D.P. Gallegos, D.M. Smith, C.J. Brinker, AN NMR TECHNIQUE FOR THE ANALYSIS OF PORE STRUCTURE - APPLICATION TO MESOPORES AND MICROPORES, *Journal of Colloid and Interface Science* 124 (1988) 186-198.
218. C.J. Brinker, R.J. Kirkpatrick, D.R. Tallant, B.C. Bunker, B. Montez, NMR CONFIRMATION OF STRAINED DEFECTS IN AMORPHOUS SILICA, *Journal of Non-Crystalline Solids* 99 (1988) 418-428.
219. C.J. Brinker, B.C. Bunker, D.R. Tallant, K.J. Ward, R.J. Kirkpatrick, STRUCTURE OF SOL GEL-DERIVED INORGANIC POLYMERS - SILICATES AND BORATES .2, *Acs Symposium Series* 360 (1988) 314-332.
220. C.J. Brinker, HYDROLYSIS AND CONDENSATION OF SILICATES - EFFECTS ON STRUCTURE, *Journal of Non-Crystalline Solids* 100 (1988) 31-50.
221. R.A. Weimer, P.M. Lenahan, T.A. Marchione, C.J. Brinker, ELECTRONIC-PROPERTIES OF SOL-GEL-DERIVED OXIDES ON SILICON, *Applied Physics Letters* 51 (1987) 1179-1181.
222. D.L. Griscom, C.J. Brinker, C.S. Ashley, ELECTRON-SPIN-RESONANCE STUDIES OF IRRADIATED O-17-ENRICHED SOL-GEL SILICAS - ORGANIC IMPURITY EFFECTS AND THE STRUCTURE OF THE NONBRIDGING-OXYGEN HOLE CENTER, *Journal of Non-Crystalline Solids* 92 (1987) 295-301.
223. G.W. Scherer, C.J. Brinker, E.P. Roth, STRUCTURAL RELAXATION IN GEL-DERIVED GLASSES, *Journal of Non-Crystalline Solids* 82 (1986) 191-197.
224. R.B. Pettit, C.J. Brinker, USE OF SOL-GEL THIN-FILMS IN SOLAR-ENERGY APPLICATIONS, *Solar Energy Materials* 14 (1986) 269-287.
225. C.J. Brinker, D.R. Tallant, E.P. Roth, C.S. Ashley, SOL-GEL TRANSITION IN SIMPLE SILICATES .3. STRUCTURAL STUDIES DURING DENSIFICATION, *Journal of Non-Crystalline Solids* 82 (1986) 117-126.
226. C.J. Brinker, G.W. Scherer, DEHYDRATION OF GELS AND GLASSES IN THE SYSTEMS B₂O₃-SiO₂ AND ZrO₂-SiO₂ PREPARED BY THE SOL-GEL PROCESS FROM METAL ALKOXIDES - COMMENT, *Journal of the American Ceramic Society* 69 (1986) C12-C14.
227. C.J. Brinker, B.C. Bunker, D.R. Tallant, K.J. Ward, CHEMICAL-REACTIVITY AND THE STRUCTURE OF GELS, *Journal De Chimie Physique Et De Physico-Chimie Biologique* 83 (1986) 851-858.
228. G.W. Scherer, C.J. Brinker, E.P. Roth, SOL-GEL-GLASS .3. VISCOUS SINTERING,

- Journal of Non-Crystalline Solids 72 (1985) 369-389.
229. R.B. Pettit, C.J. Brinker, C.S. Ashley, SOL-GEL DOUBLE-LAYER ANTIREFLECTION COATINGS FOR SILICON SOLAR-CELLS, *Solar Cells* 15 (1985) 267-278.
230. C.J. Brinker, G.W. Scherer, E.P. Roth, SOL-GEL-GLASS .2. PHYSICAL AND STRUCTURAL EVOLUTION DURING CONSTANT HEATING RATE EXPERIMENTS, *Journal of Non-Crystalline Solids* 72 (1985) 345-368.
231. C.J. Brinker, G.W. Scherer, SOL-GEL-GLASS .1. GELATION AND GEL STRUCTURE, *Journal of Non-Crystalline Solids* 70 (1985) 301-322.
232. C.J. Brinker, E.P. Roth, G.W. Scherer, D.R. Tallant, STRUCTURAL EVOLUTION DURING THE GEL TO GLASS CONVERSION, *Journal of Non-Crystalline Solids* 71 (1985) 171-185.
233. C.J. Brinker, K.D. Keefer, D.W. Schaefer, R.A. Assink, B.D. Kay, C.S. Ashley, SOL-GEL TRANSITION IN SIMPLE SILICATES .2, *Journal of Non-Crystalline Solids* 63 (1984) 45-59.
234. C.J. Brinker, D.M. Haaland, R.E. Loehman, OXYNITRIDE GLASSES PREPARED FROM GELS AND MELTS, *Journal of Non-Crystalline Solids* 56 (1983) 179-184.
235. C.J. Brinker, D.M. Haaland, OXYNITRIDE GLASS-FORMATION FROM GELS, *Journal of the American Ceramic Society* 66 (1983) 758-765.
236. R.B. Pettit, C.J. Brinker, SOL-GEL PROTECTIVE COATINGS FOR BLACK CHROME SOLAR SELECTIVE FILMS, *Proceedings of the Society of Photo-Optical Instrumentation Engineers* 324 (1982) 176-183.
237. C.J. Brinker, K.D. Keefer, D.W. Schaefer, C.S. Ashley, SOL-GEL TRANSITION IN SIMPLE SILICATES, *Journal of Non-Crystalline Solids* 48 (1982) 47-64.
238. C.J. Brinker, FORMATION OF OXYNITRIDE GLASSES BY AMMONOLYSIS OF GELS, *Journal of the American Ceramic Society* 65 (1982) C4-C5.
239. D.K. Ottesen, C.J. Brinker, IR STUDY OF THE GEL-TO-GLASS CONVERSION, *American Ceramic Society Bulletin* 60 (1981) 364-365.
240. J.J. Mecholsky, C.J. Brinker, MEASUREMENT OF CRACK-GROWTH RESISTANCE AT GLASS-CERAMIC-METAL INTERFACES, *American Ceramic Society Bulletin* 60 (1981) 373-373.
241. L.C. Klein, C.J. Brinker, CRYSTALLIZATION IN MIXED ALKALI SILICATE AND BOROSILICATE GLASSES IN CONTACT WITH MOLTEN SODIUM, *American Ceramic Society Bulletin* 60 (1981) 354-354.
242. C.J. Brinker, S.P. Mukherjee, COMPARISONS OF SOL-GEL-DERIVED THIN-FILMS WITH MONOLITHS IN A MULTICOMPONENT SILICATE GLASS SYSTEM, *Thin Solid Films* 77 (1981) 141-148.
243. C.J. Brinker, S.P. Mukherjee, CONVERSION OF MONOLITHIC GELS TO GLASSES IN

- A MULTICOMPONENT SILICATE GLASS SYSTEM, *Journal of Materials Science* 16 (1981) 1980-1988.
244. C.J. Brinker, L.C. Klein, BEHAVIOR OF SILICATE AND BOROSILICATE GLASSES IN CONTACT WITH METALLIC SODIUM .2. BOROSILICATE GLASSES, *Physics and Chemistry of Glasses* 22 (1981) 22-28.
245. C.J. Brinker, M.S. Harrington, SOL-GEL DERIVED ANTIREFLECTIVE COATINGS FOR SILICON, *Solar Energy Materials* 5 (1981) 159-172.
246. C.J. Brinker, C.S. Ashley, S.T. Reed, MICROWAVE EFFECTS ON SOL-GELS, *American Ceramic Society Bulletin* 60 (1981) 364-364.
247. C.J. Brinker, GEL-TO-GLASS CONVERSION IN THE BOROSILICATE GLASS SYSTEM, *American Ceramic Society Bulletin* 60 (1981) 364-364.
248. S.P. Mukherjee, C.J. Brinker, MULTICOMPONENT SILICATE GLASS COATINGS BY THE SOL-GEL PROCESS, *American Ceramic Society Bulletin* 59 (1980) 331-331.
249. J.J. Mecholsky, C.J. Brinker, R.J. Sanford, V.J. Parks, FRACTURE-MECHANICS ANALYSIS OF A GLASS CERAMIC-TO-METAL SEAL, *American Ceramic Society Bulletin* 59 (1980) 822-822.
250. C.J. Brinker, J.J. Mecholsky, INFLUENCE OF MICROSTRUCTURE ON FRACTURE OF PHASE-SEPARATED GLASSES, *American Ceramic Society Bulletin* 59 (1980) 352-352.
251. C.J. Brinker, L.C. Klein, Behavior of Silicate and Borosilicate Glasses in Contact with Metallic Sodium .1. Sodium Silicate Glasses, *Physics and Chemistry of Glasses* 21 (1980) 141-145.
- B.K. Sponello, C.J. Brinker, W.R. Ott, Lead silicate--potassium carbonate solid--solid reaction kinetics, *Thermochemica Acta* 6 (1973) 85-94.