Curriculum Vitae
Karen K. Gleason

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Education

Ph.D. Chemical Engineering, University of California, 1987
M.S. Chemical Engineering, Massachusetts Institute of Technology, 1982 (simultaneous with B.S.)
B.S. Chemistry, Massachusetts Institute of Technology, 1982

Professional Experience

1/16/2020-present	Alexander and I. Michael Kasser Professor of Chemical Engineering, MIT, Emerta
7/2006–1/15/2020	Alexander and I. Michael Kasser Professor of Chemical Engineering, MIT
42014–62018	Associate Provost, MIT, with primary responsibilities for space allocation, planning, and management of the renovation budget, along with oversight of MIT's industrial engagements, Technology Licensing Office (TLO), and Industrial Liaison Program (ILP). Co-chair of the Information Technology Governance Committee (ITGC).
4/2008–1/2011	Associate Dean of Engineering for Research, MIT
7/2005–4/2008	Associate Director, Institute for Soldier Nanotechnologies, MIT
7/2001–6/2004	Executive Officer (Vice-chair), Department of Chemical Engineering, MIT
7/2000–6/2006	Professor, MIT
7/1993–6/2000	Associate Professor, MIT
6/1991–5/1995	Esther and Harold E. Edgerton Career Development Professor, MIT
9/1987–6/1993	Assistant Professor, MIT
9/1987–6/1990	Herman P. Meissner Career Development Professor in Chemical Engineering, MIT
11/2014-present	Co-founder and Principle Scientist, DropWise (drop-wise.com), Cambridge, MA. DropWise won the Gold Prize at MassChallenge in 2014 for technology to improve the efficiency and reduce the carbon emissions of power plants by controlling the mechanism by which steam condenses on surfaces.
5/2001–present	Co-founder and Chief Scientific Advisor, GVD Corporation (gvdcorp.com), Cambridge, MA (headquarters) and Greenville, SC (manufacturing). GVD offers custom surface modification services and equipment. Products in include RapidRelease™ coatings applied to the molds used in the manufacture of tires, Enduro™ hydrophobic release layers on advanced gaskets, and Excilis™ encapsulation layers for the protection of printed circuit boards,

Honors

ICI Canada Distinguished Lectureship Series, University of Calgary, 2020 (upcoming)
John M. Prausnitz American Institute of Chemical Engineering Institute Lecturer Award, 2019
Elected to the National Academy of Engineering, 2015
Charles M.A. Stine Award, American Institute of Chemical Engineers, 2015
International Union of Pure and Applied Chemistry, Distinguished Women in Chemistry or Chemical Engineering Award, 2015
Adel Sarofilm Distinguished Lecture, University of Utah, 2015
Fellow, American Institute of Chemical Engineering, 2013
American Institute of Chemical Engineering Process Development Research Award, 2012
ID TechEx Printed Electronics Europe Best Technical Development Materials Award, 2011
Tis Lahiri Lectureship, Department of Chemical Engineering, Vanderbilt University, 2013

Mawson Lectureship, University of South Australia, December 2009
Visiting Professor, Donders Chair, Utrecht University, Netherlands, 2006
Excellence Award for Research in Manufacturing and Environment, Safety and Health, sponsored by Semiconductor Research Corporation and International SEMATECH, 2000
Van Ness Lectureship, Department of Chemical Engineering, Rensselaer Polytechnic Institute, 2000
Keynote Speaker, Dielectrics for ULSI Multilevel Interconnection Conference, San Jose, CA 1999
National Science Foundation Presidential Young Investigator Award, 1990–1995
Office of Naval Research Young Investigator Program, 1990–1993
Materials Research Society Graduate Student Award, 1986
Amoco Foundation Fellowship, 1982–1985
National Collegiate Athletic Association (NCAA) Postgraduate Fellowship, 1982–1983
MIT Outstanding Scholar Athlete, 1982
Warren K. Lewis Fellowship, 1981–1982
Corning's Women in Engineering Fellowship, 1981
Captain, MIT Women's Swimming Team, 1980–1982
All-American NCAA Division III Swimming, 1978–1982
National Merit Scholarship, 1978
Westinghouse Science Talent Search Semifinalist, 1978

Professional Society Memberships

American Chemical Society
American Institute of Chemical Engineers
American Vacuum Society
Electrochemical Society
Materials Research Society

Professional Service Activities

9/2018-present	Deputy Editor, *Science Advances* (AAAS)
12/2019	Co-organizer Symposium FF05: Materials Research Society Meeting, Boston, MA
4/2017	Lead organizer for Rising Stars in Chemical Engineering, October 4 & 5, 2018, MIT (https://cheme.mit.edu/rising-stars/)
5/2018	Co-organizer Symposium S: European Materials Research Society Meeting, Strasbourg, France.
9/2015-8/2018	American Institute of Chemical Engineering (AIChE) Awards Selection Committee
9/2015-8/2018	American Institute of Chemical Engineering (AIChE) Braskem Award Selection Committee
9/2015-present	MIT Deshpande Center Steering Committee
5/2015-6/2018	University Advisory Board of the HKUST-MIT Alliance
4/2015-6/2018	MIT-Philips Alliance Steering Committee
11/2014-10/2015	Massachusetts Competitive Partnership Academic Committee
4/2014-6/2018	Ragon Institute Steering Committee
4/2014-3/2016	Dupont-MIT Alliance Steering Committee
6/2013–present	Executive Advisory Board, *Advanced Materials Interfaces* (Wiley)
2012–2014	Scientific Committee, International Conference on Desalination using Membrane Technology
2009–2014	External Advisory Board, Center for Hierarchical Manufacturing, University of Massachusetts–Amherst
6/2009	Guest Editor, Special Issue on CVD of Polymeric Materials in *Chemical Vapor Deposition*
8/2008	Chair, 5th International Conference on Hot-Wire Chemical Vapor Deposition
2007–present	Editorial Board, *Chemical Engineering Communications* (Taylor and Francis)
2005–2013	Editorial Board, *Plasma Processes and Polymers* (Wiley)
2004–present	International Organizing Committee, International Conference on Hot-Wire CVD
1998	Chair, Gordon Conference on Diamond Synthesis, Oxford, UK

Issued US Patents

1. Gleason KK, Limb SJH, Gleason EF, Sawin HH, Edell DJ. 1999. "Chemical vapor deposition of fluorocarbon polymer thin films," US Patent No. 5,888,591, issued 03/30/1999.
2. Gleason KK, Kwan MC. 2000. "Pyrolytic chemical vapor deposition of silicone films," US Patent No. 6,045,877, issued 04/04/2000.
3. Gleason KK, Limb SJH, Gleason EF, Sawin HH, Edell DJ. 2000. "Chemical vapor deposition of fluorocarbon polymer thin films: 1st divisional application," US Patent No. 6,153,269, issued 11/28/2000.
4. Gleason KK, Limb SJH, Gleason EF, Sawin HH, Edell DJ. 2000. "Chemical vapor deposition of fluorocarbon polymer thin films: 2nd divisional application," US Patent No. 6,156,435, issued 12/05/2000.
5. Gleason KK, Ober C, Herr D. 2003."Solventless, resistless, direct dielectric patterning," US Patent No. 6,509,138, issued 01/21/2003.
6. Gleason KK, Murthy SK. 2005. "Fluorocarbon-organosilicon copolymers and coatings prepared by hot-filament CVD," US Patent 6,887,578, issued 05/03/2005.
7. Gleason KK, Ober C, Herr D. 2005." "Electrical device including dielectric layer formed by direct patterning process," US Patent No. 6,946,736, issued 09/20/2005.
8. Gleason KK, Loo LSS, Lipson M, Kimerling LC. 2007. "Air gaps for optical applications," US Patent No. 7,227,678, issued 06/05/2007.
9. Gleason KK, Lock J, Kimerling LC. 2007. "Polysilane thin films for directly patternable waveguides," US Patent No. 7,190,871, issued 03/13/2007.
10. Gleason KK, Wu Q, Ross A. 2006. "Porous material formation by chemical vapor deposition onto colloidal crystal templates," US Patent No. 7,112,615, issued 09/26/2006.
11. Gleason KK, Chan K. 2008. "Chemical vapor deposition of hydrogel films," US Patent No. 7,431,969, issued 10/07/2008.
12. Gleason KK, Martin TP, Chan K. 2009. "Chemical vapor deposition of antimicrobial polymer coatings," US Patent No. 7,563,734, issued 07/21/2009.
13. Gleason KK, Lock J. 2009. "Oxidative chemical vapor deposition of electrically conductive and electrochromic polymers," US Patent No. 7,618,680, issued 11/17/2009.
14. Gleason KK, Rutledge GC, Gupta M, Ma M, Mao Y. 2010. "Superhydrophobic fibers produced by electrospinning and chemical vapor deposition," US Patent No. 7,651,760, issued 01/26/2010.
15. Gleason KK, Vanddiraju S. 2012. "Light emitting device including semiconductor nanocrystals," US Patent No. 8,106,420, issued 01/31/2012.
16. Gleason KK, Xu J. 2013. "Hard, impermeable, flexible, and conformal organic coatings," US Patent No. 8,372,928, issued 02/12/2013.
17. Gleason KK, Arora WJ, Barbasthathis G, Tenhaeff WE. 2013. "Electro-mechanical switches and methods of use thereof," US Patent No. 8,441,081, issued 05/14/2013.
18. Gleason KK, Clark HA, Baxamusa S, Dubach JM. 2013. "Coated sensors and methods related thereto," US Patent No. 8,470,300, issued 06/25/2013.
19. Gleason KK, Bhattacharyya D. 201. "Biosensors," US Patent No.9034659, issued 5/19/2015.
20. Gleason KK, Kong J, Park H, Howden RM. "Devices comprising graphene and a conductive polymer and related systems and methods, 2012." US Patent No. 9136488, issued 9/15/2015.
21. Gleason KK, Petruczok CD, "Three-Dimensional Photoresists via Functionalization of Polymer Thin Films Fabricated by iCVD", US Patent No. 9163307, issued 10/20/2015.
22. Gleason KK, Bulovic V, Barr MC, Rowehl J. "Conductive Polymer on a Textured or Plastic Substrate", US Patent No. 9214639, issued 12/15/2015.
23. Handy ES, White AJ, O'Shaughnessy WS, Pryce Lewis HG, Bansal NP, Gleason, KK, "Methods for coating articles" United States Patent 9,387,508, issued 7/12/2016.

24. Arora, W.J.; Gleason, K.K.; Barbastathis, G.; Tenhaeff, W.E.; "Electro-mechanical switches and methods of use thereof", United States Patent 9,448,219, issued September 20, 2016.
25. Paxton, A.T.; Yague, J.L.; Varanasi, K.K.; Gleason, K.K. Liu, A. "Grafted polymer surfaces for dropwise condensation, and associated methods of use and manufacture", United States Patent 9,498,934, issued November 22, 2016.
26. Gleason, K.K.; Im, S.G. "Conductive polymer films grafted on organic substrates", United States Patent 9,530,965, issued December 27, 2016.
27. Barr M.C.; Gleason, K.K. Carbonera, C., Po, R., Bulovic, V. "Cathode buffer materials and related devices and methods", United States Patent 9,553,268, issued January 24, 2017
28. Gleason, K.K.; Khan, Z.; Shafi, H.Z.; Yang, R.; "Development of zwitterionic coatings that confer ultra anti-biofouling properties to commercial reverse osmosis membranes", United States Patent 9,598,598, issued March 21, 2017.
29. Gleason, K.K.; Yang, R.; Segal, Y.; Buonassisi, T.; Jayan, B.R.; "Fabrication and passivation of silicon surfaces", United States Patent 9,656,294, issued May 23, 2017.
30. White, A.J.; O'Shaughnessy, W.S.; Handy, E.S.; Lewis, H.G.P.; Gleason, K.K. "Coatings for electrowetting and electrofluidic devices", United States Patent 9,714,463, issued July 25, 2017.
31. Gleason, K.K.; Bulovic, V.; Barr, M.C.; Borrelli, D.C. "Methods for fabricating devices including photovoltaic devices", United States Patent 9,793,479, issued October 17, 2017.
32. Colton, C.K.; Gleason, K.K.; Coclite, Anna M.; Dilenno, Amanda R. "Articles and methods for stem cell differentiation", United States Patent 9,816,070, issued November 14, 2017.
33. Gleason, Karen K.; Coclite, A.M. Methods of coating surfaces using initiated plasma-enhanced chemical vapor deposition", United States Patent 9,884,341, issued February 6, 2018
34. Bhattacharyya D; Gleason K; Barr MC, "Single-unit reactor design for combined oxidative, initiated, and plasma-enhanced chemical vapor deposition", United States Patent 9,957,618, issued May 1, 2018
35. Hart, Anastasios John; Kim, Sanha; Sojoudi, Hossein; Gleason, Karen K.;" Nanoporous stamp for flexographic printing" 10,118,426, issued November 6, 2018
36. Gleason, Karen K.; Wang, Minghui; Boscher, Nicolas D.; Choquet, Patrick, "Ultra-thin, Pinholes-free, Flexible Metal-Organic Films" United States Patent 10,155,843, issued December 18, 2018
37. Liu, Andong, Gleason Karen K, Wang, Minghui, "Vapor-deposited nanoscale ionic liquid gels as gate insulators for low-voltage high-speed thin film transistors", United States Patent 10,510,971, issued December 17, 2019
38. Gleason, Karen K; Yang, Rong, "Antifouling and chlorine-resistant ultrathin coatings on reverse osmosis membranes", United States Patent 10,519,326, issued December 31, 2019
39. White, Aleksandr J.; O'Shaughnessy, William Shannan; Johnson, Seth; Gleason, Karen K; "Liquid-impregnated coatings and devices containing the same", United States Patent 10,519,326, issued January 28, 2020.

Books and Book Chapters

1. Matsumura H., Umemoto H., Gleason KK, and Schropp R.E.I. (2019*) Catalytic Chemical Vapor Deposition: Technology and Applications of Cat-CVD*, Wiley, ISBN 9783527818662
2. Wang X, Gleason KK (2019) oxidative Chemical Vapor Deposition for Conjugated Polymers: Theory and Applications, chapter for *Conjugated Polymers: Perspective, Theory, and New Materials*, CRC Press, edited by Reynold JR Thompson BC, and Skotheim TA.
3. Gleason KK (2019) Organic Surface Functionalization by initiated Chemical Vapor Deposition (iCVD), chapter for *Surface Modification of Polymers: Methods and Applications* (Wiley) ISBN: 9783527345410, edited by Thiery D. and Pinson J.
4. Gleason KK, editor (2015). *CVD Polymers. Fabrication of Organic Surfaces and Devices* (Wiley) ISBN-13: 978-3527337996 ISBN-10: 3527337997\

5. Gleason KK (2015). Overview of Chemically Vapor Deposited (CVD) Polymers, chapter for *CVD Polymers. Fabrication of Organic Surfaces and Devices* (Wiley), edited by Gleason KK, p. 1-9.
6. Yague J, Gleason KK (2014). Vapor Deposition of Fluoropolymer Surfaces, chapter for *Handbook of Fluoropolymer Science and Technology*, Wiley, edited by Smith DW, Iacono ST, and Iyer SS, p. 133-149.
7. McNamara KM and Gleason KK (1998). Characterization of Diamond, chapter for *Industrial Handbook for Diamond and Diamond Films*, Marcel Dekker, edited by Bigelow K, p. 413-480
8. Gleason KK (1996). Multiple Quantum NMR in Solids, chapter for *Encyclopedia of Nuclear Magnetic Resonance,* Wiley, edited by Grant DM and Harris RK, vol. 5, p. 3163-3172.
9. Gleason KK (1996). Diamond Thin Films, chapter for *Encyclopedia of Nuclear Magnetic Resonance*, Wiley, edited by Grant DM and Harris RK, vol. 5, p. 1592-1599.

Publications in Refereed Journals

1. Gharahcheshmeh MH, Tavakoli MM, Gleason EF, Robinson MT, Kong J, Gleason, KK (2019) tuning, optimization, and perovskite solar cell device integration of poly(3,4-ethylene dioxythiophnene) films via a single-step all-dry process, *Science Advances*, 5(11) eaay0414 doi:10.1126/sciadv.aay0414.
2. Gharahcheshmeh MH, Gleason, KK (2019) Hall of Fame Article: Device Fabrication Based on Oxidative Chemical Vapor Depostion (oCVD) Synthesis of Conducting Polymers and Related Conjugated Organic Materials, *Adv. Mater. Interfaces*, 6, 1801564 doi: 10.1002/admi.201970016
3. Zhou Y, Wang X, Acauan L, Kalfon-Cohen E, Ni X, Stein Y, Gleason KK, Wardle BL (2019) Ultrahigh-Areal-Capacitance Flexible Supercapacitor Electrodes Enabled by Conformal P3MT on Horizontally Aligned Carbon-Nanotube Arrays, *Adv. Mater.* 31(30), 1901916 doi: 10.1002/adma.201901916
4. Schroder S, Strunskus T, Rehders D, Gleason KK, Faupel F (2019) Tunable polytetrafluoroethylene electret films with extraordinary charge stability synthesized by initiated chemical vapor deposition for organic electronics applications, Scientific Reports 9, 2237 doi: 10.1038/s41598-018-38390-w.
5. Aktas, OC, Schroder S, Veziroglu S, Ghori MZ, Haidar A, Polonskyi O, Strunskus T, Gleason K, Faupel F (2019) Superhydrophobic 3D Porous PTFE/TiO2 Hybrid Structures, *Adv. Mater. Interfaces,* 6(4) 1801967, doi: 10.1002/admi.201801967
6. Khalil K, Soto D, Farnham T, Paxson A, Katmis AU, Gleason KK, Varanasi, KK, Grafted Nanofilms Promote Dropwise Condensation of Low-Surface-Tension Fluids for High-Performance Heat Exchangers, *Joule*, 3, 1377-1388, doi: 10.1016/j.joule.2019.04.009
7. Sojoudi H, Nemani SK, Mullin KM, Wilson MG, Aladwani, H, Lababidi H, Gleason, KK (2019) Micro-Nanoscale Approach for Studying Scale Formation and Developing Scale-Resistant Surfaces, *ACS Appl. Mater. & Interfaces*, 11(7), 7330-7337, doi: 10.1021/acsami.8b18523
8. Zhao J, Wang M, Jebuti M, Zhu M, Gleason KK (2019) Fundamental nanoscale surface strategies for robustly controlling heterogeneous nucleation of calcium carbonate, *J. Mater. Chem. A*, 7, 17242-17247 doi: 10.1039/C9TA04341A
9. Dolejsi M, Moni P, Bezik CT, Zhou C, de Pablo JJ, Gleason KK, Nealey PF (2019) Ultrathin initiated chemical vapor deposition polymer interfacial energy control for directed self-assembly hole-shrink applications, *J. Vacuum Sci. Technol. B*, 37, 061804 doi:10.1116/1.5121541
10. Wang XX, Zhang X, Sun L, Lee D, Lee S, Wang MH, Zhao JJ, Shao-Horn Y, Palacios T, Gleason KK (2018) High electrical conductivity and carrier mobility in oCVD PEDOT thin films by engineered crystallization and acid treatment, *Science Advances*, **4**, article no. eaat5780 doi: 10.1126/sciadv.aat5780

11. Xu Y, Wang XX, Zhou J, Song B, Zhang J, Lee EMY, Huberman S, Gleason KK, Chen G (2018) Molecular Engineered Conjugated Polymer with High Thermal Conductivity, *Science Advances,* **4**, article no. eaar3031 doi: 10.1126/sciadv.aar3031
12. Mao XM, Lui AD, Tian WD, Wang XX, Gleason KK, Hatton TA (2018) Enhancing Performance Stability of Electrochemically Active Polymers by Vapor-Deposited Organic Networks, *Advanced Functional Materials*, **28**, article no. 1706028 doi: 10.1002/adfm.201706028.
13. Sojoudi H, Arabnejad H, Raiyan A, Shirazi, SA, McKinley GH, Gleason KK (2018) Scalable and Durable Polymeric Icephobic and Hydrate-Phobic Coatings, 14, 3443-3464 *Soft Matter* doi: 10.1039/C8SM00225H
14. Zhao JJ, Wang MH, Lababadi HMS, Al-Adwani H, Gleason KK (2018) A review of heterogeneous nucleation of calcium carbonate and control strategies for scale formation in multi-stage flash (MSF) desalination plants, *Desalination*, **442**, 75-88 doi: 10.1016/j.desal.2018.05.008
15. Moni P, Suh HS, Dolejsi M, Kim DH, Mohr AC, Nealy PF, Gleason KK (2018) Ultrathin and Conformal Initiated Chemical-Vapor-Deposited Layers of Systematically Varied Surface Energy for Controlling the Directed Self-Assembly of Block Copolymers, *Langmuir*, **34**, 4494-4502 doi: 10.1021/acs.langmuir.8b00173
16. Soto D, Ugur A, Farnham TA, Gleason KK, Varanasi KK (2018) Short-Fluorinated iCVD Coatings for Nonwetting Fabrics, *Advanced Functional Materials,* **28**, article no. 1701355 doi: 10.1002/adfm.201707355
17. Moni P, Mohr AC, Gleason KK (2018) Growth Rate and Cross-Linking Kinetics of Poly(divinyl benzene) Thin Films Formed via Initiated Chemical Vapor Deposition, *Langmuir*, **34**, 6687-6696 doi: 10.1021/acs.langmuir.8b00624
18. Mao XM, Lui AD, Tian WD, Wang XX, Gleason KK, Hatton TA (2018) Enhancing Performance Stability of Electrochemically Active Polymers by Vapor-Deposited Organic Networks, *Advanced Functional Materials*, vol. 28, no. 10, article no. 1706028 doi: 10.1002/adfm.201706028.
19. Lee S, Borrelli DC, Jo WJ, Reed AS, Gleason KK (2018) Nanostructured Unsubstituted Polythiophene Films Deposited using oxidative Chemical Vapor Deposition: Hopping Conduction and Thermal Stability, *Advanced Materials Interfaces doi: 10.1002/admi.201701513*
20. Sojoudi H, Arabnejad H, Raiyan A, Shirazi, SA, McKinley GH, Gleason, KK (2018) Scalable and Durable Polymeric Icephobic and Hydrate-Phobic Coatings, *Soft Matter* doi: 10.1039/C8SM00225H
21. Suh HS, Kim DH, Moni P, Xiong SS, Ocola LE, Zaluzec NJ, Gleason KK, Nealey PF (2017) Sub-10-nm patterning via directed self-assembly of block copolymer films with a vapour-phase deposited topcoat, *Nature Nanotechnology*, 13, 575-581, doi:10.1038/NNANO.2017.34 eISSN: 1748-3395
22. Liu AD, Kovacik P, Peard N, Tian WD, Goktas H, Lau J, Dunn B, Gleason KK (2017) Monolithic Flexible Supercapacitors Integrated into Single Sheets of Paper and Membrane via Vapor Printing, *Advanced Materials*, vol. 29, article no. 1606091 doi:10.1002/adma.201606091
23. Wang MH, Wang XX, Moni P, Liu AD, Kim DH, Jo WJ, Sojoudi H, Gleason KK (2017) CVD Polymers for Devices and Device Fabrication, *Advanced Materials*, 28, article no. UNSP 1604606 doi:10.1002/adma.201604606
24. Warsinger DM, Servi A, Conners GB, Mavukkandy MO, Arafat HA, Gleason KK, Lienhard JH (2017) Reversing membrane wetting in membrane distillation: comparing dryout to backwashing with pressurized air, *Environmental Science-Water Research & Technology,* 3, 930 doi: 10.1039/c7ew00085e
25. Sojoudi, H, Kim, S, Zhao, HB, Annavarapu RK, Mariappan D, Hart AJ, Gleason KK (2017) Stable Wettability Control of Nanoporous Microstructures by iCVD Coating of Carbon Nanotubes, *ACS Applied Materials and Interfaces,* 49, 43287-43299 doi: 10.1021/acsami.7b13713
26. Wang M, Kovacik P, Gleason, KK (2017) Chemical Vapor Deposition of Thin, Conductive, and Fouling-Resistant Polymeric Films, *Langmuir* 33 10623-10631 doi: 10.1021/acs.langmuir.7b02646.
27. Wang MH, Zhao JJ, Wang XX, Liu AD, Gleason KK (2017). Recent progress on submicron gas-selective polymeric membranes, *Journal of Materials Chemistry A* 5 8860-8886, doi: 10.1039/c7ta01862b

28. Zhao JJ, Wang MH, Gleason KK (2017) Stabilizing the Wettability of Initiated Chemical Vapor Deposited (iCVD) Polydivinylbenzene Thin Films by Thermal Annealing, *Advanced Materials Interfaces*, 4, article no. 1700270, doi: 10.1002/admi.201700270
29. Bucs SS, Valladares L, Farhat N, Matin A, Khan Z, Loosdrecht CM, Yang R, Wang M, Gleason KK, Kruithof JC, Vrouwenvelder JS (2017) Coating of reverse osmosis membranes with amphiphilic copolymers for biofouling control, *Desalination and Water Treatment,* 68, 1-11 doi: 10.5004/dwt.2017.20369
30. Servi AT, Guillen-Burrieza E, Warsinger DM, Livernois W, Notarangelo K, Kharraz J, Lienhard JH, Arafat HA, Gleason KK (2017) The effects of iCVD film thickness and conformality on the permeability and wetting of MD membranes, *Journal of Membrane Science*, vol. 523, pp. 470-479, doi:10.1016/j.memsci.2016.10.008
31. Castillo ML, Ugar A, Soujoudi H, Nakamura N, Liu Z, Lin F, Brandt RE, Buonassissi T, Reeja-Jayan B, Gleason KK (2017) Organic passivation of silicon through multifunctional polymeric interfaces, *Solar Energy Materials and Solar Cells*, vol. 160, pp. 470-475, doi:10.1016/j.solmat.2016.10.050
32. Lachman N, Stein IY, Ugar A, Lidston DL, Gleason KK, Wardle BL (2017) Synthesis of polymer bead nano-necklaces on aligned carbon nanotube scaffolds, *Nanotechnology*, vol. 28, article no. 24LT01, doi:10.1088/1361-6528/aa71c5
33. Wang XX, Ermez S, Goktas H, Gradecak, S, Gleason KK (2017) Room Temperature Sensing Achieved by GaAs Nanowires and oCVD Polymer Coating, Macromolecular Rapid Communications, vol. 38, article no. 170055 doi:10.1002/marc.201700055
34. Shafi HZ, Matin A, Akhtar S, Gleason KK, Zubair SM, Khan Z (2017) Organic fouling in surface modified reverse osmosis membranes: Filtration studies and subsequent morphological and compositional characterization, *Journal of Membrane Science*, 527, 152-163 doi:10.1016/j.memsci.2017.01.017
35. Wang M, Boscher ND, Heinz K, Gleason KK (2017) Gas Selective Ultrathin Organic Covalent Networks Synthesized by iPECVD: Does the Central Metal Ion Matter? Advanced Functional Materials, 27, article no. 1606652, doi: 10.1002/adfm.201606652
36. Moni P, Al-Obeidi A, Gleason KK (2017) Vapor deposition routes to conformal polymer thin films, Beilstein *Journal of Nanotechnology*, 8, 723–735, doi:10.3762/bjnano.8
37. Kim S, Sojoudi H, Zhao H, Mariappan D, McKinley GH, Gleason KK, and Hart AJ (2016). Ultrathin high-resolution flexographic printing using nanoporous stamps, *Science Advances*, article no. ne1601660, doi: 10.1126/sciadv.1601660o
38. Boscher ND, Wang M, Perrotta A, Heinze K, Creatore M, Gleason KK (2016) Metal-Organic Covalent Network Chemical Vapor Deposition for Gas Separation, *Advanced Materials*, 28 7479-7485, doi:10.1002/adma.201601010 ***(Frontispiece)***
39. Boscher ND, Wang M, Gleason KK (2016) 'Chemical Vapor Deposition of metalloporphyins: a simple route towards the preparation of gas separation membranes, *Journal of Material Chemistry A*, 4, 18144-18154, doi:10.1039/c6ta08003k
40. Raayai-Ardakani S, Yague JL, Gleason KK, Boyce MC (2016) Mechanics of Graded Wrinkling, *Journal of Applied Mechanics-Transactions of the ASME*, 83, Article No. 121011 doi:10.1115/1.4034829
41. Goktas H, Wang XX, Boscher ND, Torosian S, Gleason KK (2016) Functionalizable and electrically conductive thin films formed by oxidative chemical vapor deposition (oCVD) from mixtures of 3-thiopheneethanol (3TE) and ethylene dioxythiophene (EDOT), *Journal of Materials Chemistry C*, 4, 3403-3414 doi:10.1039/c6tc00567e
42. Wang M, Perrotta A, Heinze K, Creatore M, Gleason KK (2016). Metal–Organic Covalent Network Chemical Vapor Deposition for Gas Separation. *Advanced Materials* 28, 7479-7485, doi: 10.1002/adma.201601010
43. Jo WJ, Nelson JT, Chang, S, Bulović, V, Gradečak S., Strano MS, Gleason KK (2016). Oxidative Chemical Vapor Deposition of Neutral Hole Transporting Polymer for Enhanced Solar Cell Efficiency and Lifetime. *Advanced Materials* 28, 6399-6404, doi:10.1002/adma.201601221

44. Chen N, Reeja-Jayan B, Liu A, Lau J, Dunn B, Gleason KK (2016). iCVD Cyclic Polysiloxane and Polysilazane as Nanoscale Thin-Film Electrolyte: Synthesis and Properties *Macromolecular Rapid Communications* 37, 446-452, doi: 10.1002/marc.201500649

45. Servi A, Kharraz J, Klee D, Notarangelo K, Eyob B, Guillen-Burriezza E, Liu A, Hassan A, Gleason KK (2016). A systematic study of the impact of hydrophobicity on the wetting of MD membranes Journal of Membrane Science 520, 850-859, doi: 10.1016/j.memsci.2016.08.021

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Invited Lectures

1. John M. Prausnitz AICH Institute Lecture, AIChE Annual Meeting, Orlando FL; November 13, 2019.
2. Durable Surface Energy Control with Initiated Chemical Vapor Deposition (iCVD) Polymers, American Vacuum Society (AVS), Columbus OH; October 23, 2019
3. Vapor Deposited Polymers: from Fundamentals to Commercialization, University of Illinois, Department of Chemical & Biomolecular Engineering, Urbana, IL; September 24, 2019.
4. Chemical Vapor Deposition of Zwitterionic Surfaces, 4th Int'l Conf. on Bioinspired and Zwitterionic Materials, Kerkrade, The Netherlands; June 18, 2019 ***Plenary address***
5. Vapor Deposited Polymers: from Fundamentals to Commercialization, American Physical Society March Meeting, Boston, MA, March 4, 2019.
6. Vapor Deposited Polymers: from Fundamentals to Commercialization, AIChE Women in Chemical Engineering (WIC) 20th Anniversary Symposium, Pittsburgh, PA; October 30, 2018.
7. Initiated Plasma-Enhanced CVD of Ultrathin Gas-Selective Polymers Films, American Vacuum Society (AVS) 65th International Symposium & Exhibition, Long Beach, CA; October 22, 2018 .
8. Vapor Deposited Polymers: from Fundamentals to Commercialization, 2018 STAMI Industrial Partners Day and Exposition, Georgia Tech, Atlanta, GA; September 27, 2018. ***Keynote address***
9. Stable Wettability Control of Nanoporous Microstructures by Ultrathin Polymers for Applications in Electronics, European Materials Research Symposium (EMRS), Strasbourg, France; June 19, 2018.
10. Initiating Polymers from Monomer Vapors via Heat, Light, and Plasma, Physics Dept. Colloquium, Graz University of Technology (TU Graz), Graz, Austria; June 14, 2018.
11. Ultrathin and Conformal Polymer Films for Organic Surfaces and Devices, 17th Congress of the Asian-Pacific Confederation of Chemical Engineering, Hong Kong, August 24, 2017. ***Plenary address***
12. Welcoming Address, History and Future of Massachusetts Innovation, HUBweek MIT, Cambridge, MA, September 27, 2017.
13. Synthesizing Polymers by iCVD for Organic Surfaces & Devices, 9th International Conference on Hot Wire and Initiated CVD, Philadelphia, PA, September 6 2016. ***Keynote address***
14. Panelist for Clean Energy session, Conference of New England Governors & Eastern Canadian Premiers, Boston, MA, August 29, 2016.
15. Synthesizing Polymers from Monomer Vapors for Organic Surfaces & Devices, St. Gobain, Northboro, MA, June 10, 2016.
16. Philips MIT alliance: Introduction to the MIT Innovation ecosystem, Eindhoven, Netherlands, May 12, 2016
17. Moderator for Panel Discussion:At the Crossroads of Collaboration: How the MIT Campus will change by 2030, a launch activity for MIT's Campaign for a Better World, May 7th, 2016.
18. Opening Remarks, MIT J-WAFS Food and Water Conference, Cambridge, MA, April 27th, 2016.
19. Food and Water-borne Pathogen Detection, MIT J-WAFS Food and Water Conference, Cambridge, MA, April 27th, 2016.
20. Synthesizing Polymers from Monomer Vapors for Organic Surfaces & Devices, UCLA, Chemical Engineering Departmental Seminar, Los Angeles, CA, April 15th, 2016.
21. Panelist Analog Devices Women's Forum, Boston, MA, April 12, 2016
22. Synthesizing Polymers from Monomer Vapors for Organic Surfaces & Devices, University of Washington, Chemical Engineering Departmental Seminar, Seattle, April 4th, 2016.
23. Engineering the Vapor Deposition of Organic Surfaces & Devices, Microsystems Technology Laboratory Industrial Advisory Board Meeting, January 22, 2016.
24. Ultrathin and Durable Fluoropolymer Networks by initiated Chemical Vapor Deposition, Pacific Polymer Conference, ACS Pacific Polymer Conference, Kauai, HI, Dec 12, 2015.

25. Synthesizing Polymers from their Monomer Vapors for Organic Surfaces and Devices Synthesizing Polymers from their Monomer Vapors for Organic Surfaces and Devices, National Academy of Engineering, Section 3, Washington DC, Oct. 5, 2015.
26. AIChE Stine Award Lecture, Engineering the Vapor Deposition of Organic Thin Films and Devices, AIChE National Meeting, Salt Lake City, UT, Nov 11, 2015. ***Award Lecture.***
27. Synthesizing Polymers from their Monomer Vapors for Organic Surfaces and Devices, Department of Material Science, Georgia Institute of Technology, Sept. 14, 2015.
28. Science Talent Search Alumni Reception, hosted by Akamai: panelist with Eric Lander, Erika Ebbeel Angle, Frank Wilczek, Tom Leighton, Sept 9, 2015.
29. The Accidental Entrepreneur: the Road to Commercialization of Ultrathin Vapor Deposited Polymer Films, MIT Brazil Challenge of Innovation Conference, San Paulo, Brazil May 13, 2015.
30. Chemically Vapor Deposited (CVD) Polymers for Device Fabrication, Spring MRS Meeting, San Francisco, April 8, 2015
31. All in the Life of a Chemical Engineer: from Spectroscopist to Accidental Entrepreneur', Adel F. Sarofim Distinguished Lecture, University of Utah Department of Chemical Engineering, March 24, 2015. ***Named lectureship.***
32. Durable Water Shedding Surfaces, Solve for X (Google X). San Martin, CA, February 5, 2014.
33. Solvent-free Polymerization for Surface Design. Materials Research Society, Boston, MA, December 2, 2013.
34. Vapor Printed Surface and Devices on Fiber-based Substrates. Harvard Science Symposium "Smart Clothes," Cambridge, MA, November 15, 2013.
35. Solvent-free Polymerization at Surfaces by initiated Chemical Vapor Deposition (iCVD). Japan Society of Applied Physics and Materials Research Society Joint Symposium, Kyoto, Japan, September 16, 2013.
36. Chemically Vapor Deposited Polymers: A New Paradigm for Surface Modification and Device Fabrication. Department of Chemical Engineering, Korea Advanced Institute of Science and Technology, September 2013.
37. Vapor Printed Organic Electrodes. 14th SPIE Conference on Organic Photovoltaics, San Diego, CA, August 25, 2013.
38. Vapor Printed Electrodes. 6th International Symposium on Flexible Organic Electronics, Thessaloniki, Greece, June 28, 2013. **Keynote speaker.**
39. Initiated and Oxidative CVD Polymers for Paper PV. Society of Vacuum Coaters, Providence, RI, April 24, 2013.
40. Chemically Vapor Deposited Polymers: A New Paradigm for Surface Modification and Device Fabrication. Tis Lahiri Lecture, Department of Chemical Engineering, Vanderbilt University, Nashville, TN, April 15, 2013. **Named lectureship.**
41. Vapor Deposited Polymers for Membrane Applications. Masdar Institute, Abu Dhabi, United Arab Emirates, January 10, 2013.
42. Paper Photovoltaics. Microfluidics 2.0 Conference, Boston University, Boston, MA, November 30, 2012.
43. Chemical Vapor Deposition for Ultrathin and Conformal Fluoropolymer Surfaces. Fluoropolymer 2012 Conference, Las Vegas, NV, October 15, 2012.
44. Designing Novel Devices with Chemically Vapor Deposited Polymers. Department of Chemical and Biomolecular Engineering, Cornell University, Ithaca, NY, September 17, 2012.
45. Designing Novel Devices with Chemically Vapor Deposited Polymers. 14th International Conference on Organized Molecular Films, Paris, France, July 12, 2012.
46. Designing Novel Devices with Chemically Vapor Deposited Polymers. IUPAC MACRO 2012, Blacksburg, VA, June 27, 2012.
47. Designing Novel Devices with Chemically Vapor Deposited Polymers. Canadian Society of Chemistry, Calgary, Canada, May 29, 2012.

48. Designing Novel Devices with Chemically Vapor Deposited Polymers. Institut Químic de Sarrià, Barcelona, February 23, 2012.
49. Paper PV. Printed Electronics USA 2011 Conference, Santa Clara, CA, December 1, 2011.
50. Ultrathin and Conformal Biopassivation CVD Polymers. 2011 MIT Research and Development Conference, Cambridge, MA, November 16, 2011.
51. Paper PV. MIT Energy Initiative Advisory Board, Cambridge, MA, November 11, 2011.
52. Designing Novel Devices with Chemically Vapor Deposited Polymers. Department of Chemical, Materials, and Biomolecular Engineering, University of Connecticut, Storrs, CT, September 27, 2011.
53. CVD Polymers. PerkinElmer NanoSymposium, Museum of Science, Boston, MA, August 25, 2011.
54. CVD Polymers for Biosensing. US Food and Drug Administration, Winchester, MA, August 11, 2011.
55. Designing Surfaces with Chemically Vapor Deposited (CVD) Polymers. Center for Advanced Materials and Membranes, Pall Corporation, Port Washington, NY, July 13, 2011. **Inaugural lecture.**
56. CVD Polymers. Aixtron, Herzogenrath, Germany, April 7, 2011.
57. Paper PV. Printed Electronics Europe 2011 Conference, Dusseldorf, Germany, April 5–6, 2011. **Keynote address**.
58. CVD Polymers. Henkel, Dusseldorf, Germany, April 4, 2011.
59. Designing Novel Devices with Chemically Vapor Deposited Polymers. ACS Award in Chemistry Materials: Symposium in Honor of Debra Rolison, Anaheim, CA, March 28, 2011.
60. CVD Polymers. Presentation to Dr. Thomas Russell, Director, Air Force Office of Scientific Research, MIT, March 25, 2011.
61. Designing Novel Devices with Chemically Vapor Deposited Polymers. Chemical Engineering Seminar, MIT, Cambridge, MA, March 18, 2011.
62. Designing Novel Devices with Chemically Vapor Deposited Polymers. 6th International Smart Coatings Symposium, Orlando, FL, February 24, 2011.
63. Designing Novel Devices with Chemically Vapor Deposited Polymers. International Microelectronics and Packaging Society, Cambridge, MA, January 18, 2011.
64. Polymers by Chemical Vapor Deposition, featuring GVD Corporation. MIT's Technology Breakfast Series, Cambridge, MA, December 2, 2010.
65. Designing Novel Devices with Chemically Vapor Deposited Polymers. Epoch Foundation, MIT, Cambridge, MA, November 4, 2010.
66. Responsive and Conducting Polymers by Chemical Vapor Deposition. Mechanical, Materials and Structures Technical Network Symposium, Burlington, MA, October 6, 2010.
67. CVD Polymers. Aixtron AG, Aachen, Germany, September 21, 2010.
68. Initiating Hot Wire Chemical Vapor Deposition for Conformal and Responsive Polymeric Layers. 6th International Conference on Hot-Wire Chemical Vapor Deposition, Paris, France, September 13, 2010.
69. Patterning Nanodomains with Orthogonal Functionalities: Solventless Synthesis of Self-sorting Surfaces. NanoOptics Plasmonics Conference, Rockville, MD, April 21, 2010.
70. Functional and Conducting Polymer Thin Films by Vapor Deposition. Department of Chemical and Biological Engineering Seminar, Tufts University, Medford, MA, January 25, 2010.
71. Engineering the Chemistry of Vapor Deposited Functional and Responsive Polymeric Surfaces. 11th Pacific Polymer Conference, Cairns, Australia, December 7, 2009. **Keynote address**.
72. Functional and Conducting Polymer Thin Films by Vapor Deposition. American Vacuum Society, San Jose, CA, November 10, 2009.
73. Initiated and Oxidative Chemical Vapor Deposition (CVD) of Conformal and Functional Polymers. EuroCVD16, Vienna, Austria, October, 2009.

74. Functional and Conducting Polymer Thin Films by Vapor Deposition. 23rd International Conference on Amorphous and Nanocrystalline Semiconductors, Utrecht, Netherlands, August 25, 2009. **Keynote address**.
75. Designing Functional and Responsive Organic Surfaces by Chemical Vapor Deposition (with S.G. Im). 13th International Conference on Surface and Colloid Science and the 83rd ACS Colloid and Surface Science Symposium, New York, NY, June 17, 2009.
76. Functional and Conducting Polymer Thin Films by Vapor Deposition. Raytheon, Tewksbury, MA, June 9, 2009.
77. Patterning Nano-domains with Orthogonal Functionalities: Solventless Synthesis of Self-sorting Surfaces. 2009 Optical Data Storage Topical Meeting (IEEE sponsored), Orlando, FL, May 12, 2009.
78. Designing Functional and Responsive Organic Surfaces by Chemical Vapor Deposition. Department of Chemical Engineering Seminar, University of Colorado, Boulder, CO, March 31, 2009.
79. Designing Functional and Responsive Organic Surfaces by Chemical Vapor Deposition. Department of Chemical Engineering Seminar, University of Rochester, Rochester, NY, February 25, 2009.
80. Designing Functional and Responsive Organic Surfaces by Chemical Vapor Deposition. Polymer Technology and Fiber Engineering Seminar, Georgia Institute of Technology, Atlanta, GA, February 9, 2009.
81. Designing Functional and Responsive Organic Surfaces by Chemical Vapor Deposition. Department of Chemical Engineering Seminar, University of Massachusetts, Amherst, MA, February 6, 2009.
82. Functional and Responsive Organic Surfaces by Chemical Vapor Deposition. MIT Industrial Liaison Program (ILP) Annual Symposium, Cambridge, MA, October 28, 2008.
83. Functional Vapor Deposited Polymers for Ligand Attachment and Patterning. Fluoropolymer 2008 (ACS sponsored), Charleston, SC, October 20, 2008.
84. Designing Functional and Responsive Organic Surfaces by Chemical Vapor Deposition. Department of Chemical Engineering Seminar, University of Texas, Austin, TX, September 30, 2008.
85. Surface Modification by Vapor Deposited Polymeric Nanocoatings. Army Research Lab, Adelphi, MD, March 18, 2008.
86. Engineering the Vapor Deposition of Conducting Polymer Nanocoatings. Chemical Engineering Department, Drexel University, Philadelphia, PA, February 1, 2008.
87. Design of Chemical Vapor Deposition Processes for Low-k Dielectrics and Air Gap Formation. IMEC, Leuven, Belgium, January 23, 2008.
88. Surface Modification by Vapor Deposited Polymeric Nanocoatings. MIT in Japan: 10th Annual Symposium, Tokyo, Japan, January 18, 2008.
89. Surface Modification by Vapor Deposited Polymeric Nanocoatings. Teijin, Tokyo, Japan, January 17, 2008.
90. Air Gap Fabrication. Tokyo Electron, Ltd. Tokyo, Japan, January 17, 2008.
91. Surface Modification by Vapor Deposited Polymeric Nanocoatings. Hitachi, Tokyo, Japan, January 16, 2008.
92. Surface Modification by Vapor Deposited Polymeric Nanocoatings. MIT ILP-Epoch Taiwan Symposium, Taipei, Taiwan, January 14, 2008.
93. Engineering Polymeric Nanocoatings by Vapor Deposition. 31st Annual Symposium of the Macromolecular Science and Engineering Program at the University of Michigan, Ann Arbor, MI, October 25, 2007.
94. Conformal Polymeric Thin Films via Initiated Chemical Vapor Deposition. American Vacuum Society, Seattle, WA, October 15, 2007.
95. Chemical Vapor Deposition of Polymeric Nanocoatings. Department of Chemical Engineering, University of Calgary, Calgary, Canada, October 5, 2007.

96. Initiated CVD of Polymeric Nanocoatings. 16th European Conference on Chemical Vapor Deposition, The Hague, Netherlands, September 20, 2007.
97. Sensing Science at the Institute for Soldier Nanotechnologies. ACS National Meeting, Boston, MA, August 21, 2007. **Invited panelist.**
98. The Institute for Soldier Nanotechnologies. Emerging Defense Technologies Conference, Paris, France, June 14, 2007.
99. Engineering the Chemistry of Vapor Deposition. Raytheon, Andover, MA, May 9, 2007.
100. Polymeric Nanocoatings by Chemical Vapor Deposition. Presstek, Cambridge, MA, April 24, 2007.
101. Polymeric Nanocoatings by Chemical Vapor Deposition. St. Gobain, Northboro, MA, April 13, 2007.
102. Biopassivation Coatings by Initiated CVD from Trivinyltrimethylcyclotrisiloxane. 2007 Materials Research Society Spring Meeting: Symposium, San Francisco, CA, April 11, 2007.
103. Design of CVD Processes for Low-k Dielectrics and Air Gap Formation. 2007 Materials Research Society Spring Meeting: Symposium B, San Francisco, CA, April 11, 2007.
104. Polymeric Nanocoatings by Chemical Vapor Deposition. CIBA, by webcast, March 22, 2007.
105. Polymeric Nanocoatings by Chemical Vapor Deposition. Millipore, Bedford, MA, January 16, 2007.
106. Nonfouling iCVD Coatings for Optodes. Draper Laboratory, Cambridge, MA, January 9, 2007.
107. Strategies for Frugal Vacuum Processing. Defense Advanced Research Projects Agency/Microsystems Technology Office Workshop on Low-Volume N/MEMS Manufacturing for Defense Applications, Chantilly, VA, November 29, 2006.
108. Initiated Chemical Vapor Deposition of Fluorinated Acrylate Homopolymer and Copolymer Thin Films. Fluoropolymer 2006 (sponsored by the ACS), Charleston, SC, October 16, 2006.
109. The Institute for Soldier Nanotechnologies. University Affiliated Research Center Director's Meeting, Salt Lake City, UT, September 12, 2006.
110. Polymeric Nanocoatings by Chemical Vapor Deposition. Debye Lecture, Utrecht University, Netherlands, June 14, 2006.
111. Initiated Chemical Vapor Deposition of Polymeric Thin Films. Ornstein Colloquium, Utrecht University, Netherlands, June 9, 2006.
112. Mechanistic Aspects of initiated Chemical Vapor Deposition for Polymeric Films. 209th Electrochemical Society Meeting, Denver, CO, May 9, 2006.
113. Initiated Chemical Vapor Deposition of Polymeric Thin Films. Chemical Engineering Department, City College of New York, New York, NY, April 24, 2006.
114. Fundamentals of Chemically Vapor-deposited Organosilicate Glass (OSG) Low-*k* Dielectrics. MIRAI Workshop on Interconnect Technology, Tsukuba, Japan, 2006. **Keynote address.**
115. From Prototype to Product with the Help of SBIR [Small Business Innovation Research] Funding. American Institute of Chemical Engineers, October 2005.
116. Initiated Chemical Vapor Deposition of Flexible Polymeric Coatings. Plastic Electronics, Frankfurt, Germany, October 6, 2005.
117. Polymer Nanocoating by initiated Chemical Vapor Deposition. Medtronics, Minneapolis, MN, September 21, 2005.
118. Microsphere Encapsulation with Polymers by Chemical Vapor Deposition. Dupont, Wilmington, DE, May 20, 2005.
119. Polymeric Nanocoatings by initiated Chemical Vapor Deposition. Nanotech 2005, Anaheim, CA, May 10, 2005.
120. Chemical Vapor Deposition of Porous Organosilicon Low-k Dielectrics. American Chemical Society National Meeting, San Diego, CA, March 14, 2005.
121. Polymeric Nanocoatings by Chemical Vapor Deposition. Michelin, Greenville, SC, February 11, 2005.

122. Engineering the Vapor Deposition of Polymers. Department of Chemical Engineering, Case Western Reserve University, Cleveland, OH, November 4, 2004.
123. Fluoropolymers by Chemical Vapor Deposition. Fluoropolymer 2004 (ACS Sponsored), Savannah, GA, October 9, 2004.
124. Polymeric Nanocoatings by Hot Wire Chemical Vapor Deposition. 3rd International Conference on Hot Wire CVD, Utrecht, Netherlands, August 26, 2004.
125. Chemical Strategies for Structural Retention and Rapid Growth of Vapor-deposited Organic Films. Gordon Conference on Plasma Processing, Holderness, NH, August 18, 2004.
126. Polymeric Nanocoatings by Chemical Vapor Deposition. Bakaert, Buffalo, NY, July 14, 2004.
127. Polymeric Nanocoatings by Chemical Vapor Deposition. Xerox, Webster, NY, July 13, 2004.
128. Silicone Nanocoatings by Chemical Vapor Deposition. Silicon Symposium, Philadelphia, PA, May 2004.
129. Polymeric Nanocoatings by Hot Filament Chemical Vapor Deposition. Department of Materials Science and Engineering, Cornell University, Ithaca, NY, April 29, 2004.
130. Engineering Surfaces for Nanotechnology. MIT on the Road, Detroit, MI, November 2002.
131. Status of Women Faculty at MIT. American Institute of Chemical Engineers National Meeting, Indianapolis, IN, November 6, 2002.
132. Fluorinated Dielectrics via CVD. 224th American Chemical Society National Meeting, Boston, MA, August 22, 2002.
133. Thin Film Characterization by Solid State NMR. Rocky Mountain Conference on Analytical Chemistry, Denver, CO, August 1, 2002.
134. Engineering the Chemistry of Vapor Deposition. Department of Chemical Engineering, Penn State, University Park, PA, April 2002.
135. Engineering the Chemistry of Vapor Deposition. Chemical Engineering Seminar, Georgia Tech, Atlanta, GA, April 2002.
136. Low Dielectric Constant Films. Dupont Experimental Station, Wilmington, DE, January 2002.
137. Air Gap Technology. TEL Corporate Research Center, Yamanashi, Japan, December 10, 2001.
138. New Paradigms for Low Dielectric Constant Films. Semicon Japan, Tokyo, Japan, December 7, 2001.
139. New Paradigms for Low Dielectric Constant Films. TMS/SPE Polymer Materials Conference, Indianapolis, IN, November 3, 2001. **Keynote address**.
140. Pulsed-plasma Deposition of Organosilicon Films. CIP'2001-13th International Colloquium on Plasma Processes, Antibes-Juan les Pins, France, June 10, 2001.
141. Mechanical Properties of Fluorocarbon Polymer Thin Films Grown by PECVD. International Conference on Metallurgical Coatings and Thin Films Meeting, San Diego, CA, June 3, 2001.
142. Low Dielectric Constant Films. IEEE International Interconnect Technology Conference, Santa Clara, CA, June 1, 2001.
143. Engineering the Chemistry of Vapor Deposition. Chemical Engineering Colloquium, University of Arizona, Tucson, AZ, April 17, 2001.
144. New Paradigms for Low Dielectric Constant Films. TEL Advanced Technology Forum, Tokyo, Japan, April 13, 2001.
145. Patternable CVD Thin Films. Materials Research Society, San Francisco, CA, April 1, 2001.
146. Low-k Dielectrics for Pulsed-plasma CVD of Organosilicon Precursors. Materials Research Society, San Francisco, CA, April 1, 2001.
147. Porous and Directly Patternable PTFE Films Grown by Hot-filament Chemical Vapor Deposition. Fluorine in Coatings IV, Brussels, Belgium, March 3, 2001.
148. Pulsed-plasma–Enhanced Deposition of Low-k Materials. Sematech Workshop on Low-k Materials. Austin, Texas, February 20, 2001.
149. Chemical Vapor Deposition of Low-k Materials. Atofina, King of Prussia, PA, February 16, 2001.

150. Pulsing or Eliminating the Plasma Enhancement of Chemically Vapor-deposited Organic Thin Films. Center for Plasma-Aided Manufacturing Colloquium, University of Wisconsin, Madison, WI, January 26, 2001.
151. Fast Magic Angle Spinning ^{19}F NMR of Fluorocarbon Polymers and Thin Films. Winter Fluorine Conference, St. Petersburg, FL, January 15, 2001.
152. Elucidating the Molecular Architecture of Chemically Vapor-deposited (CVD) Fluorocarbons. PACIFICHEM 2000, Honolulu, HI, December 14, 2000.
153. HWCVD [Hot-wire Chemically Vapor-deposited] Fluorocarbon & Organosilicon Thin Films. Japan, November 2000.
154. Low Dielectric Constant Materials for Microelectronics. Van Ness Lectures, Rensselaer Polytechnic Institute, Troy, NY, October 16–26, 2000.
155. Engineering the Chemistry of Vapor Deposition. Van Ness Lectures, Rensselaer Polytechnic Institute, Troy, NY, October 16–26, 2000.
156. CVD Films as Directly Patternable Low-k Dielectrics. American Vacuum Society National Meeting, Boston, MA, October 2, 2000.
157. Pulsed-plasma and Hot-Filament CVD Dielectrics. Semicon West, San Francisco, CA, July 10, 2000.
158. Chemical Vapor Deposition for Nanotechnology. Defense Advanced Research Projects Agency: Applied Physics of Nanostructures, Arlington, VA; May 8, 2000.
159. Fluorocarbon Films Vapor Deposited in the Absence of a Plasma. Polymers for Microelectronics, Winterthur, DE, May 1, 2000.
160. Patternable Low-k Dielectrics Developed by Supercritical CO_2. Semiconductor Safety Association Meeting; Washington, DC, April 26, 2000.
161. *In Situ* Deformation of Nylon 6 Monitored by ^{2}H NMR. American Chemical Society National Meeting, San Francisco, CA, March 27, 2000.
162. Pulsed-plasma and Hot Filament Organosilicon CVD. American Chemical Society National Meeting, San Francisco, CA, March 27, 2000.
163. CVD of Fluorocarbon Low-K Dielectric Films. Fluorocarbon Plasma Workshop, Grenoble, France, March 20, 2000.
164. Chemical Vapor Deposition of Low Dielectric Films. American Vacuum Society, New England Chapter, Cambridge, MA, February 16, 2000.
165. Hot-Wire CVD Flurocarbon and Organosilicon Thin Films. Japan, January 2000.
166. Fluorocarbon Low Dielectric Constant Chemical Vapor Deposition. American Chemical Society Workshop on Low-k Materials, Monterey, CA, November 1999.
167. Low Dielectric Constant CVD Fluorocarbon Films, American Chemical Society National Meeting. PMSE-Symposium on Micro- and Nano-Patterning Science and Technology, New Orleans, LA, August 1999.
168. CVD of Fluorocarbon Low-k Dielectric Films. Gordon Research Conference on Electronic Materials, New England College, Henniker, NH, July 1999.
169. The History and Future of Fluorocarbon CVD Dielectric Thin Films. Dielectrics for ULSI Multilevel Interconnection Conference (DUMIC), San Jose, CA, February 1999. **Keynote Address.**
170. Controlling and Characterizing the Molecular Architecture of Pulsed Plasma and Pyrolytic Chemical Vapor Deposition (CVD) Fluorocarbons and Organosilicones. 1st Alpine International Symposium on Plasma Processing of Polymers, Campitello di Fassa, Italy, January–February 1999.
171. Controlling and Characterizing the Molecular Architecture of Fluorocarbon Thin Films by Chemical Vapor Deposition (CVD). Department of Chemical Engineering, Stanford University, , Stanford, CA, January 1999.
172. Controlling and Characterizing the Molecular Architecture of Fluorocarbon Thin Films by Chemical Vapor Deposition (CVD). Department of Chemical Engineering, Colorado State University, Fort Collins, CO, January 1999.

173. Controlling and Characterizing the Molecular Architecture of Fluorocarbon Thin Films by Chemical Vapor Deposition (CVD). Department of Chemical Engineering, Colorado School of Mines, Golden, CO, January 1999.
174. Fast MAS and Multidimensional NMR of Fluorocarbon Chemically Vapor Deposited Thin Films. International Symposium on the NMR Spectroscopy of Polymers (sponsored by the Polymer Division of the ACS), Breckenridge, CO, January 1999.
175. Pulsed Plasma Enhanced and Pyrolytic Chemical Vapor Deposition of Fluorocarbon Films. Fluorine in Coatings III Conference, Orlando, FL, January 1999.
176. Low Dielectric Constant Fluorocarbon Films. Materials Research Society Fall Meeting, Boston, MA, December 1998.
177. Pulsed Plasma and Pyrolytic CVD of Fluorocarbon and Organosilicone Films. Naval Research Laboratory, Washington, DC, November 1998.
178. Pulsed Plasma Enhanced Chemical Vapor Deposition form $C_2H_2F_4$, CH_2F_2, and $CHC1F_2$. Materials Research Society Spring Meeting, San Francisco, CA, April 1998.
179. NMR of Pulsed Plasma and Pyrolytic CVD Fluorocarbon Films. 1997 Federation of Analytical Chemistry and Spectroscopy Societies, Providence, RI, October 1997.
180. ES&H Issues Related to Low-k Materials, Processing Advanced Metallization and Interconnect Systems for ULSI Applications. San Diego, CA, September 1997.
181. Pulsed Plasma and Pyrolytic CVD of Low Dielectric Constant Fluorocarbon Films. Tokyo Electron Ltd., Tokyo, April 1997.
182. Pulsed Plasma Enhanced and Pyrolytic CVD of "Teflon-like" Thin Films. DuPont, Wilmington, DE, March 1997.
183. Pulsed Plasma Enhanced and Pyrolytic CVD of Low Dielectric Constant Fluorocarbon Films. Intel, Santa Clara, CA, February 1997.
184. Novel CVD of Polymeric Thin Films. Applied Biosystems, Perkin-Elmer, Foster City, CA, February 1997.
185. Pulsed Plasma Enhanced and Pyrolytic CVD of "Teflon-like" Thin Films. Department of Chemical Engineering, North Carolina State University, Raleigh, NC, February 1997.
186. Pulsed Plasma Enhanced and Pyrolytic CVD of "Teflon-like" Thin Films. Becton Dickinson Research Center, Research Triangle Park, NC, February 1997.
187. Theory and Modelling of Processes and Process Redesign: Design for the Environment. Panel Discussion, Materials Research Society, Boston, MA, December 1996.
188. CVD of Teflon-like Thin Films, Lam Research, Fremont, CA, October 1996.
189. Novel CVD of "Teflon"-like Insulating Biomaterials. American Vacuum Society 43rd Annual Meeting, Philadelphia, PA, October 1996.
190. Pulsed-Plasma Polymer Deposition. Defense Sciences Research Council, La Jolla, CA, July 1996.
191. NMR of Diamond Films. Department of Chemistry, University of Illinois, Chicago, IL, February 1996.
192. Solid-State Multiple Quantum NMR of Polymer Mixtures. ACS, Honolulu, HI, December 1995.
193. Solid-State NMR of Polymeric Blends. Program in Polymer Science and Technology Seminar, MIT, October 1995.
194. Relating Defect Structure to Growth Processes in Solids. Department of Chemical Engineering Seminar Series, University of California, Berkeley, CA, May 1995.
195. Deposition and Defect Studies of Diamond Thin Films. Department of Materials Science, University of California, Berkeley, CA, May 1995.
196. Nuclear Magnetic Resonance of Optical Materials. Spire, Bedford, MA, March 1995.
197. Diamond Deposition and Defects. Department of Chemical Engineering Seminar Series, Rice University, Houston, TX, March 1995.
198. Pulsed Plasma Fluorocarbon Films. AT&T Bell Laboratories, February 1995.

199. Creating Multiple-Quantum NMR Coherences in Solids. Department of Chemistry, Sherbrooke University, Quebec, Canada, September 1994.

200. Proton and ^{19}F NMR of Solid Thin Films and Interfaces. 36th Rocky Mountain Conference in Analytical Chemistry, Denver, CO, August 1994.

201. Multiple Quantum NMR Studies of Microstructure in Solids. 14th Blue Hen NMR Symposium, University of Delaware, Newark, DE, June 1994.

202. Applications of Solid-State Multiple Quantum NMR. Exxon Research and Development, Annandale, NJ, June 1994.

203. Application of ^{1}H, ^{13}C and ^{19}F to Diamond Thin Films. Gordon Conference on Diamond Synthesis, Henniker, NH, June 1994.

204. Probing Molecular Dynamics in Solids via Multiple Quantum Coherences. 35th Experimental Nuclear Magnetic Resonance Conference, Asilomar, CA, April 1994.

205. NMR of Hydrogen in Bulk and Thin Film Silicon Dioxide. Physical Chemistry Seminar, Brown University, Providence, RI, April 1994.

206. Diamond Deposition and Defect Chemistry Studied by Solid-State NMR. Department of Chemical Engineering Seminar, University of California at Davis, Davis, CA, March 1994.

207. Multiple Quantum NMR in Solids. Department of Chemistry, Physical Chemistry Seminar, University of California, San Diego, San Diego, CA, November 1993.

208. Molecular Motion Studied by ^{19}F Multiple-Quantum NMR. Gordon Conference on Magnetic Resonance, Henniker, NH, July 1993.

209. Diamond Defect Detection by NMR. Condensed Matter/Surface Science Seminar, Ohio University, Athens, OH, June 1993.

210. Molecular Dynamics in Polymeric Systems Studied by ^{19}F Multiple Quantum NMR Coherences. Naval Research Laboratory, Washington, DC, April 1993.

211. Application of NMR to Diamond Surfaces. Surface Science and Catalysis Seminar, Department of Chemistry, University of California, Berkeley, Berkeley, CA, April 1993.

212. The Deposition and Microstructure of Diamond Thin Films. Department of Chemical Engineering, Iowa State University, Ames, IA, September 1992.

213. NMR of Chemical Vapor Deposited Diamond Including ^{1}H Multiple Quantum Studies. 34th Rocky Mountain Conference in Analytical Chemistry, Denver, CO, August 1992.

214. The Relationship of Hydrogen to the Optical Properties of Thin Films. 6th International Symposium on Magnetic Resonance in Colloid and Interface Science, Florence, Italy, June 1992.

215. Diamond Films: Towards Larger Areas and Fewer Defects. MIT ILP Symposium on Electronics, Cambridge, MA, May 1992.

216. Multiple Quantum Dynamics in Polycrystalline Powders and Diamond Films. 33rd Experimental Nuclear Magnetic Resonance Conference, Asilomar, CA, March 1992.

217. Revolutions in Solid-Carbon. 11th International Chemical Symposium at Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey, Mexico, March 1992.

218. NMR of CVD Diamond Films. Lockheed Missiles and Space Co., Livermore, CA, March 1992.

219. Diamond Deposition and Defects. Department of Chemical Engineering, University of Wisconsin–Madison, Madison, WI, February 1992.

220. NMR of Thin Films for Microelectronics Processing. 18th Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies, Anaheim, CA, October 1991.

221. ^{1}H and ^{19}F NMR Studies of Segregation in Diamond and Polymer Thin Films. Goodyear Tire and Rubber Co., Akron, OH, October 1991.

222. ^{19}F Multiple-Quantum NMR of Salt/Polymer Mixtures. Max Planck Institute for Polymer Research, Mainz, Germany, August 1991.
223. Characterizing Diamond Films and Deposition Chemistry via Solid-State NMR. Naval Undersea Warfare Center, Newport, RI, July 1990.
224. Solid-State NMR Studies of Thin Films. MIT ILP Symposium on "Chemical Engineering of Materials," Cambridge, MA, May 1990.
225. Solid State NMR Studies of Thin Films Used in the Fabrication of Integrated Circuits. Magnetic Resonance Seminar, MIT, Cambridge, MA, May 1990.
226. Hydrogen in Amorphous Silicon-Containing Thin-Films Studied by Solid-State NMR. IBM, Fishkill, NY, August 1989.
227. Solid-State NMR of Amorphous Thin-Film Processing: Semiconductors and Photoresists. IBM, Almaden Research Center, San Jose, CA, May 1989.
228. The Effect of Hydrogen on PECVD Thin-Film Properties Studied using Solid-State NMR. Digital Equipment Co., Hudson, MA, May 1989.
229. NMR Investigation of Atomic Microstructure in Amorphous Semiconductors. Experimental NMR Conference, Asilomar, CA, March 1987.