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Professional Preparation:

1979	B.S. in Chemical Engineering	University of Delaware
1983	M.S. in Chemical Engineering	University of Illinois – Urbana-Champaign
1985	Ph.D.in Chemical Engineering	University of Illinois – Urbana-Champaign

Appointments:

2009–Present	Distinguished Professor of Materials Science and Engineering, Univ. Delaware
2008–Present	Professor, University of Delaware
2001–2008	Professor, Michigan State University
1999–2001	Professor, Stevens Institute of Technology
1994–1998	Associate Professor, Univ. Queensland (U.S. equivalent – Professor)
Fall 1994	Visiting Professor, Univ. Delaware
1991–1994	Senior Lecturer, Univ. Queensland (U.S. equivalent – Associate Professor)
Fall 1990	Visiting Professor, Cambridge Univ.
1987–1991	Lecturer, Univ. Queensland (U.S. equivalent – Assistant Professor)
1985–1987	Postdoctoral Fellow, Univ. Melbourne
1979–1980	Staff Engineer, Procter and Gamble

Products:

1. Chung, W.J., Griebel, J.J., Kim, E.T., Yoon, H., Simmonds, A.G., Ji, H.J., Dirlam, P.T., Glass, R.S., Wie, J.J., Nguyen, N.A., Guralnick, B.W., Park, J., Somogyi, A., Theato, P., Mackay, M.E., Sung, Y.E., Char, K. and Pyun, J., 'The use of elemental sulfur as an alternative feedstock for polymeric materials,' Nature Chemistry **5** (2013) 518-524.
2. Yan, C.Q., Mackay, M.E., Czymmek, K., Nagarkar, R.P., Schneider, J.P. and Pochan, D.J., 'Injectable solid peptide hydrogel as a cell carrier: Effects of shear flow on hydrogels and cell payload,' Langmuir **28** (2012) 6076-6087.
3. J. Kiel, B. Kirby, C. Majkrzak, B. Maranville and M. E. Mackay, "Nanoparticle concentration profile in polymer-based solar cells," Soft Matter **6** (2010) 641-646.
4. J. Kiel, M.E. Mackay, B. Kirby, B. Maranville and C. Majkrzak, "Phase-sensitive neutron reflectometry measurements applied in the study of photovoltaic films," J. Chem. Phys. **133** (2010) 074902.
5. Kiel, J.W., Eberle, A.P.R., and Mackay, M.E., Nanoparticle agglomeration in polymer-based solar cells. Phys Rev. Letters **105**, (2010) 168701.
6. E. S. McGarrity, A. L. Frischknecht, L. J. D. Frink and M. E. Mackay, "Surface-induced First Order Transition in Athermal Polymer/Nanoparticle Blends," Phys Rev Letters, **99** (2007) 238302-1 - 4.
7. R. S. Krishnan, M. E. Mackay, P. M. Duxbury, A. Pastor, C. J. Hawker, B. Van Horn, S. Asokan and M. S. Wong, "Self-assembled multilayers of nanocomponents," Nano Letters, **7** (2007) 484-489.
8. A. Tuteja, M. E. Mackay, S. Narayanan, S. Asokan and M. S. Wong, "Breakdown of the continuum Stokes-Einstein relation for nanoparticle diffusion," Nano Letters, **7** (2007) 1276-1281.

9. M. E. Mackay, A. Tuteja, P. M. Duxbury, C. J. Hawker, B. V. Horn, Z. Guan, G. Chen and R. S. Krishnan, "General Strategies for Nanoparticle Dispersion," Science, **311** (2006) 1740-1743.
10. Mackay, M. E., T. T. Dao, A. Tuteja, D. L. Ho, B. van Horn, H.-C. Kim and C. J. Hawker, "Nanoscale effects leading to non-Einstein-like decrease in viscosity," Nature Materials **2** (2003) 762-766.

Synergistic Activities:

1. Developed and taught a course in Solar Energy and is wrote a textbook on the topic for Oxford University Press (presently under review).
2. Hosting a physics graduate student from University of Puerto Rico – Rio Piedras in my laboratory for summer 2013 to teach him how to make polymer-based solar cells.
3. Organizer with Profs. J. Sommer and M. Stamm of the "Polymer Nanoparticle Interactions" W.E. Heraeus Seminar, 28-31 March 2010 at the Physikzentrum Bad Honnef, Germany.
4. Session chair and organizer for "Nanostructures in Polymer-based Photovoltaics" invited session at 2011 APS March Meeting in Dallas.
5. Presented a tutorial lecture entitled "Fundamentals of polymer-based solar cells" at the 2011 ACS Spring Meeting in Anaheim.

Collaborators & Other Affiliations:

Collaborators:

Thesis Advisors: A.J. McHugh (Lehigh University), M.E. Paulaitis (Ohio State University)
Recent Collaborators: G. Baker (MSU)**,** H. Colquhoun (Reading U), P. Duxbury (MSU), A. Frischnechkt (Sandia), C. Hawker (UCSB), W. Hayes (Reading U), J Loos (U Glasgow), D. Pochan (UD), J. Pyun (U Arizona), S. Rowan (CWRU), N. Wagner (Delaware), M.S. Wong (Rice U), K.L. Wooley (Texas A&M)

Postdoctoral Researchers: (*9 supervised in total)*
Kailash Awati (1997-9), Tien D. Dao (2001-3), Donia Freidman (2008), Peter Halley (1994-5) Univ. Qld., Ye Hong (1998-9), Camilla Kelly (1995-8), Erin McGarrity (2005-7), Venkat Padmanabhan (2009–present), Eric Weisser (1996-8), Wengui Weng (2009)

Graduate students:

***Ph.D (32 supervised in total*)**: D. Bohnsack (2007) TA Instruments, T. Bohnsack (2007) Henkel, Brett Guralnick (2012) Postdoc-UD, M. Holmes (2007) Sandia, Jon Kiel (2010) Postdoc-Stanford U, R.S. Krishnan (2006) Intel, L. Passeno (2006) Sika, Jon Seppala (2010) Postdoc-Delaware, A. Tuteja (2006) Prof. U Mich, Erica Tseng (2010) Postdoc-CA

MS (2 supervised)*:* Glenda Carmezini (2000), J. Sutton (2003)

Presently supervising: Ngoc Ahn Nguyen (MSE), Rodell Remy (MSE), Hao Shen (ChE), Wenluan Zhang (MSE)