

Chemistry Faculty

Eric A. Mintz Ph.D. Ph.D.



Title: Professor Special Assistant to the Provost for Strategic Initiatives

Department and specialty

Chemistry (Organic and Materials)

Faculty member since 1988

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EDUCATION

Post Doctoral Northwestern University

Post Doctoral R.W.T.H Aachen, Institut für Anorganisch Chemie

Ph.D. University of Massachusetts

B.S. Washington State University

BIOGRAPHY

Research

Our research group is focused on the preparation and characterization of bio-based, biodegradable polymer matrix composites. We are focused on processing methods that are readily scaled to commercial process. We apply a wide range of thermosanalysis, themomechanical, mechanical methods, and XRD to characterize these the new materials.

Publications (last ten years)

1. "Using Adaptive Learning Courseware as a High-Impact Practice to Improve Students' Learning Outcomes in General Chemistry II at an HBCU" Conrad W. Ingram, Eric Mintz and Daniel Teodorescu, *Peer Review*, AAC& U, 2019 (In Press) [Peer Review](#); Washington, **12**, 1/2 (Winter/Spring 2019), 38-41. <https://www.aacu.org/publications/vision-equity>.
2. "Moving Forward in Advancing Equity for Student Success in A Vision for Equity: Results from CAU AAC&U's Project, Committing to Equity and Inclusive Excellence: Campus-Based Strategies for Student Success", Rhodes, M.; Mitchell, G.; Clayton, O.; Mintz, E.; McKinney, A. Association of American College and Universities, March 2018. March 21, **2018**,

<https://www.aacu.org/publications/vision-equity>.

3. “Rheological and Thermo-Mechanical Properties of Poly(lactic acid)/Lignin-Coated Cellulose Nanocrystal Composites” Gupta, Anju; Simmons, William; Schueneman, Gregory T.; Hylton, Donald; Mintz, Eric A. *ACS Sustainable Chem. Eng.* **2017**, 5(2), 1711 – 1720. DOI: 10.1021/acssuschemeng.6b02458
4. “Lignin-coated cellulose nanocrystals as promising nucleating agent for poly(lactic acid)” Gupta, A.; Simmons, W.; Schueneman, G. T.; Mintz, E. A. *J. Therm. Anal. Calorim.* **2016**, 126(3), 1243-1251. DOI: 10.1007/s10973-016-5657-6
5. “Thermomechanical properties of nanotubes in a thermosetting polyimide matrix: Relationship to the percolation threshold” Kincer, Michelle R.; Meree, Caitlin E.; Goss, Emily K.; Mintz, Eric A.; Shofner, Meisha L. *Composites, Part A: Applied Science and Manufacturing*, **2014**, 61, 60-66.
6. “Nanocellulose reinforced epoxy elastomer” Cross, L.; Schueneman, G.; Mintz, E.; Xu, Shanhong; Girouard, Natalie; Shofner, Meisha; Meredith, Carson, *Proceedings of the Annual Meeting of the Adhesion Society 2013*, 36th, Cross/1-Cross/3. In *Production and Applications of Cellulose Nanomaterials*, Ed. Postek, Michel T.; Moon, Robert J.; Rudie, Alan, and Bilodeau, Michael. June 2013, TAPPI Press, Peachtree Corners, GA.
7. “Mechanical and thermal property enhancement in cellulose nanocrystal/waterborne epoxy composites” Xu, Shanhong; Girouard, Natalie; Cross, Lionel; Mintz, Eric; Schueneman, Greg; Shofner, Meisha; Meredith, Carson, *Proceedings of the Annual Meeting of the Adhesion Society 2013*, 36th, Xu/1-Xu/3.
8. “RTM370 polyimide braided composites: characterization and impact testing” Chuang, Kathy C.; Revilock, Duane M.; Ruggeri, Charles R.; Criss, Jim M., Jr.; Mintz, Eric A. *SAMPE 2013, Proceedings*, Edited by Beckwith, Scott W. Long Beach, CA, United States, May 6-9, **2013**, 1388-1400.
9. “High Temperature RTM370 Polyimide Composites Fabricated by RTM: Characterization and Impact Testing” Chang, K. C.; Revilock, D. M.; Pereira, J. M.; Criss, J. M.; Mintz, E. A. *SAMPE Journal*, **2013**, 45(5), 48-57.
10. “Adhesion Improvements of Nano Cellulose Composite Interfaces” Wolf, Rory, A.; Girouard, Natalie; Xu, Shanhong; Meredith, J. Carson; Shofner, Meisha L.; Cross, Lionel; Mintz, Eric; Schueneman, Gregory, T. *Plastics Engineering*, **2013**, June, 23-37.
11. “Polymer Matrix Nanocomposites via Forest Derived Nanomaterials” Cross, L.; Schueneman, G.; Mintz, E. *Nanotech Conference & Expo 2012: An Interdisciplinary Integrative Forum on Nanotechnology, Microtechnology, Biotechnology and Cleantechology*, Santa Clara, CA, United States, June 18-21, **2012** (2012), 3, 708-711.
12. “Band Gap Opening in the Cycloaddition Functionalization of Carbon Nanotubes” Ogunro, Olayinka O.; Nicolas, Chantel I.; Mintz, Eric A.; Wang, Xiao-Qian *ACS Macro Lett.* **2012**, 1, 524–528.
13. “Network behavior of thermosetting polyimide/multiwalled carbon nanotube Composites” Schlea, Michelle R.; Meree, Caitlin E.; Gerhardt, Rosario A.; Mintz, Eric A.; Shofner, Meisha L., *Polymer* **2012**, 53, 1020 – 1027.
14. “Monitoring nanoparticle filtration in a RTM processed epoxy/carbon fiber composite”, Miller, S. G.; Micham, L.; Copa, C. C.; Criss, J. M., Jr.; **Mintz, E. A.** Edited by Bailey, Vincent P, *SAMPE 2011, Conference & Exhibition*,

Long Beach, CA, United States, May 23-26, 2011 (2011), Miller/1-Miller/11, 11 pp.

15. "Composite properties of RTM370 polyimide fabricated by VARTM", Chuang, K. C.; Criss, J. M.; **Mintz, E. A.**; Shonkwiler, B.; McCorkle, Linda S. *SAMPE Technical Conference (2011)*, 43(Developing Scalable Materials and Processes for Our Future), Chuang1/1-Chuang1/10.
16. "Dispersion and Delamination of Graphite in PETI 298 by High Torque Melt Mixing" James, Candace; Mintz, Eric A., *Polymer Preprints* **2011**, 52(2), 5-6.
17. "Synthesis, Characterization, and Photoactivity of Ta₂O₅-Grafted SiO₂ Nanoparticles" Ndiege, Nicholas; Chandrasekharan, Ramesh; Radadia, Adarsh D.; Harris, William; Mintz, Eric; Masel, Richard I.; Shannon, Mark A., *Chemistry--A European Journal* **2011**, 17(27), 7685-7693.
18. "Silver-modified iron oxide nanoparticle impregnated fiberglass for disinfection of bacteria and viruses in water" **Nangmenyi, Gordon; Li, Xuan; Mehrabi, Sharifeh; Mintz, Eric; Economy, James**, *Materials Letters*, **2011**, 65(8), 1191-1193.
19. "Polyimides based on asymmetric dianhydrides (II) (A-BPDA VS A-BTDA) for resin transfer molding (RTM)" Chuang, Kathy C.; Criss, Jim M.; Mintz, Eric A.; *SAMPE Conference Proceedings* **2010**, 55(SAMPE 2010), chuan3/1-chuan3/12.
20. "Dispersion control and characterization in multiwalled carbon nanotube and phenylethynyl-terminated imide composites" Schlea, Michelle R.; Renee Brown, T.; Bush, Jordan R.; Criss, Jim M.; Mintz, Eric A.; Shofner, Meisha L. *Composites Science and Technology* **2010**, 70(5), 822-828.
21. "Synthesis and Characterization of Silver-Nanoparticle-Impregnated Fiberglass and Utility in Water Disinfection", Gordon Nangmenyi, Zhongren Yue, Sharifeh Mehrabi, Eric Mintz and James Economy, *Nanotechnology* **2009**, 20, 495705/1-495705/10.
22. "Deposition Kinetics of *Bacteriophage MS2* to Natural Organic Matter: Role of Divalent Cations", Mai Pham, Eric A. Mintz, Thanh H. Nguyen, *J Colloid and Interface Science*, **2009**, 338 (1) 1-9.
23. "Polyimide Composites Based on Asymmetric Dianhydrides" (a-ODPA vs a-BPDA), Kathy C. Chuang, Jim M. Criss, Eric A. Mintz, *SAMPE 2009 Technical Conference Proceedings: Changing Times. New Opportunities. Are You Prepared?* Baltimore, MD, May 18-21, **2009**. Society for the Advancement of Material and Process Engineering, CD-ROM-(1-23)
24. "Nano-Particle Enhanced Polymer Materials for Space Flight Applications", Jim M. Criss, Jr., William D. Powell, John W. Connell, Yemaya Stallworth-Bordain, Tracy R. Brown, Eric A. Mintz, Michelle R. Schlea, Meisha L. Shofner; *SAMPE 2009 Technical Conference Proceedings: Changing Times. New Opportunities. Are You Prepared?*, Baltimore, MD, May 18-21, **2009**. Society for the Advancement of Material and Process Engineering, CD-ROM-(1-23).
25. "Bactericidal Activity of Ag Nanoparticle Impregnated Fiberglass for Water Disinfection" Gordon Nangmenyi, Wei Xiao, Sharifeh Mehrabi, Eric Mintz, James Economy *J Water Health* **2009**, 7, 657-663.
26. "Synthesis of Terpyridine-Functionalized Poly(phenylenevinylene)s: The role of meta-Phenylene Linkage on the Cu²⁺ and Zn²⁺ Chemosensors." Banjoko, Victor; Xu, Yongqian; Mintz, Eric; Pang, Yi. *Polymer* **2009**, 50(9),

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27. "Development of an Effective Photocatalysts (Cu Impregnated TiON/Al₂O₃) for the Disinfection of Water" Ryan Jinks, Sharifeh Mehrabi, Cachétne Barrett, Cassandra Thomas, Eric Mintz, *Conference Proceedings Water Environment Federation, Disinfection 2009*, 647-654.

Activities & Awards

2017 Aldridge-McMillan Faculty Award for Overall Achievement in Teaching, Research, and Service.