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[www.uakron.edu/cpspe/faculty-research/profile.dot?id=49221b93-c80e-4ca1-b5fb-1da5f369fec8&info=ai3](http://www.uakron.edu/cpspe/faculty-research/profile.dot?id=49221b93-c80e-4ca1-b5fb-1da5f369fec8&info=ai3)

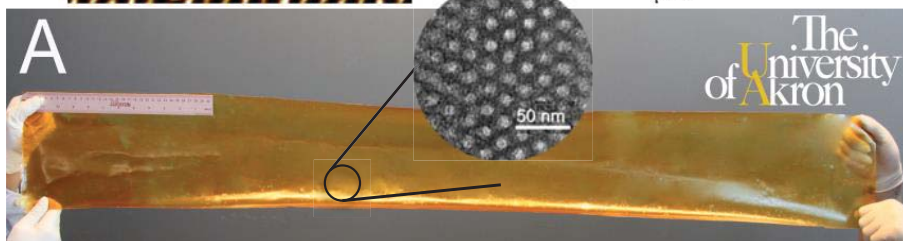
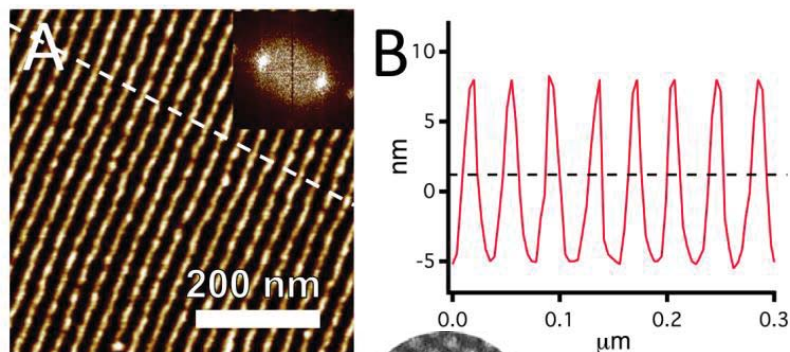
**Biography:** Bryan Vogt, a national expert in thin films and self-assembled porous materials, came to UA in 2011 from Arizona State University in Tempe, AZ, where he was an Assistant Professor of Chemical Engineering. Prior to joining ASU in 2006, Vogt was a scientist in the Polymers Division at the National Institute of Standards and Technology (NIST) where he worked with IBM, Intel and Sematech on the fundamentals of chemically amplified photoresists, Vitex on understanding moisture transport in ultrabarrriers for organic electronics and origins of critical relative humidity in adhesion failure. Vogt received his Ph.D. in chemical engineering from University of Massachusetts-Amherst.

#### Awards/Accomplishments:

- ACS Petroleum Research Foundation New Investigator Award (2009)
- NSF CAREER Award (2008)
- NRC Postdoctoral Fellowship (2002)

#### Research Interests:

Vogt's research interests include block copolymer directed assembly of porous nanocomposites; interfacial assembly of nanoparticles; mechanics of thin films and membranes; green processing of films and coatings; developments of hierarchical structures for energy storage; non-lithographic methods for patterning, controlled wetting and non-fouling surfaces; and confined/patterned hydrogels.



#### Application Focus:

- Nanotechnology* -supercapacitors, batteries, sensors, separations (membranes, adsorbents), water purification, 3D printing nanocomposites
- Polymer Films and Coatings* – porous nanocomposites, non-fouling surfaces, directional wetting
- Biomedical* – controlled release using nanomaterials, patterned surfaces for cell growth, 3D printing of hydrogels

#### Unique Capabilities:

Thin film mechanical measurements; UV-Vis-NIR-IR spectroscopic ellipsometry with liquid cell, QCM-D with simultaneous ellipsometry or electrochemistry

#### Recent Publications:

1. C.C. White, K.T. Tan, D.L. Hunston, K. Steffens, D. Stanley, S.K. Satija, B. Akgun, B.D. Vogt. Mechanisms of criticality in environmental adhesion loss. *Soft Matter* **2015**, 11, 3994-4001.
2. Y. Zhang, S.M. Bhaway, Y. Wang, K.A. Cavicchi, M.L. Becker, B.D. Vogt. Rapid (< 3 min) Microwave Synthesis of Block Copolymer Templated Ordered Mesoporous Metal Oxide and Carbonate Films using Nitrate-Citric Acid Systems. *Chemical Communications* **2015**, 51(24), 4997-5000.
3. S.M. Bhaway, P. Tangvijitsakul, J. Lee, M.D. Soucek, B.D. Vogt. High Rate Sodium Ion Battery Anodes from Block Copolymer Templated Mesoporous Cobalt-Nickel Carbonates and Oxides. *Journal of Materials Chemistry A* **2015**, 3, 21060-21069.
4. C. Ye, B.D. Vogt. Nanoporous block copolymer films using highly selective solvents and non-solvent extraction. *Soft Matter* **2015**, 11, 8499-8507.