



Department of  
Polymer Engineering  
The University of Akron, OH  
330-972-2581

[rweiss@uakron.edu](mailto:rweiss@uakron.edu)

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#### Education:

B.S. 1972 Northwestern Univ. (Chem.Eng.)  
Ph.D. 1976 Univ. of Massachusetts, Amherst  
(Chem. Eng.)

#### Experience:

Exxon Chemical Co., Baytown, TX 1975-77  
Exxon Research & Eng. Co., Linden, NJ 1977-81  
University of Connecticut, Chemical Eng. Dept.  
and Polymer Program, Storrs, CT 1981-2009  
University of Akron, Dept. of Polymer  
Engineering 2009 - present

#### Awards/Accomplishments:

- Education Award, Soc. of Plastics Eng. (SPE) (2000)
- Research Award, SPE (2002)
- AAUP Research Excellence Award (UConn) (2003)
- International Award, SPE (2008)
- Doctor honoris causa, Technical Univ. of Brno, Czech Republic, (2012)
- Fellow, American Chemical Society
- Fellow, American Physical Society
- Fellow SPE
- Fellow, North American Thermal Analysis Society

#### Research Interests:

**Types of Polymer Systems:** Ionomers, Block Copolymers, Hydrogels, Liquid Crystalline Polymers, Polymer Blends, Composite Materials

**Research Focus:** Rheology/Viscoelasticity, Scattering Techniques, Surface Techniques, Phase Behavior/Thermodynamics, Fluid Mechanics

#### Research Projects:

- Shape Memory Polymers
- Tough Hydrogels
- Nanocomposites
- Drug Delivery
- Membranes
- Capacitor Films
- Surfaces and Interfaces

#### Recent Publications/Patents:

1. Hao, J. and R. A. Weiss, Mechanical Behavior of Double Network Hydrogels Composed of a Physical Network and a Chemical Network, *Polymer*, in press (2013)
2. Hao, J-K and R. A. Weiss, Shape Memory behavior of Robust Hydrogels Composed of a Physical and a Chemical Network, *Macro Let.*, 2: 86-89 (2013)
3. Dong, J. and R. A. Weiss, Effect of Cross-linking on Shape Memory Behavior of Zinc Stearate/ Ionomer Compounds, *Macromol. Chem. Phys.*, Early View: DOI: 10.1002/macp.201200145 (2012)
4. Yoonessi, M., Y. Shi, D. A. Scheiman, M. Lebron-Colon, D. M. Tegelaar, R. A. Weiss and M. A. Meador, High-Temperature Shape Memory Effects, *ACS Nano*, 6: 7644-7655 (2012)
5. Subramanian, C., R. A. Weiss and M. T. Shaw, Chemical crosslinking of highly sulfonated polystyrene electrospun fibers, *Macromolecules*, 45, 3104-3111 (2012)
6. Ling, G. and R. A. Weiss, Linear viscoelastic and uniaxial extensional rheology of alkali metal neutralized sulfonated oligostyrene ionomer melts, *Macromolecules*, 45, 481-490 (2012)
7. Weiss, R. A., C. Erkey, S. Shenoy, D. Cohen, Conductive elastomeric foams and method of manufacture thereof, US 7,029,722, assigned to the University of Connecticut (2006)
8. Tzivanis, M. J., W. M. Risen, Jr., R. A. Weiss, T. J. Kennedy III, D. M. Melanson, Adhesion Process, US 7,396,300, assigned to Calloway Golf Co. (2008)
9. Weiss, R. A. and N. Bhiwankar, Polymer-Clay Nanocomposites and Method for Making Same, US 7,989,534, assigned to the University of Connecticut (2008)
10. Sullivan, M. J., R. A. Weiss, M. Bellinger, Golf Ball Cover Compositions, US 6,743,847, assigned to Calloway Golf Co. (2004)