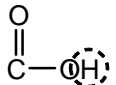
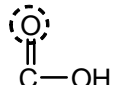
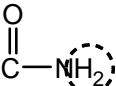
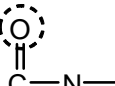
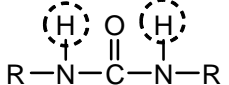
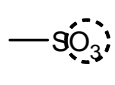
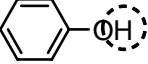
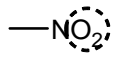
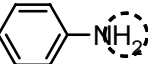
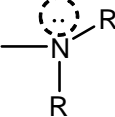
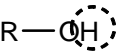


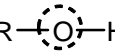
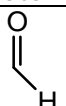
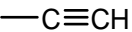


**Lecture 35: Macromolecular Systems via Secondary Bonding: Use of Hydrogen Bonding and Ionic Charge to Build Structures. Concept of Self-Assembly: From Primary Structure to Complex Structure.**

This lecture presented material covered in the following journal articles and reviews.

### Hydrogen Bonding in Polymeric Structures

Good Proton Donors	Good Proton Acceptors
	
	
	
	
	
	
	
Okay Proton Donors	
	
	

Kato, T., H. Kihara, S. Ujiie, T. Uryu, and J. M. J. Fréchet. "Structures and Properties of Supramolecular Liquid-Crystalline Side-Chain Polymers Built Through Intermolecular Hydrogen Bonds." *Macromolecules* 29, no. 27 (December 30, 1996): 8734-8739.

Alexander, C., C. P. Jariwala, C. M. Lee, and A. C. Griffin. "Self-Assembly of Main-Chain Liquid-Crystalline Polymers via Heteromeric Hydrogen Bonding." *Macromolecular Symposia* 77 (January 1994): 283-294.

Muller, M., A. Dardin, U. Seidel, V. Balsamo, B. Ivan, H. W. Spiess, and R. Stadler. "Junction Dynamics in Telechelic Hydrogen Bonded Polyisobutylene Networks." *Macromolecules* 29, no. 7 (March 25, 1996): 2577-2583.

## 2-Dimensional Polymers

Stupp, S. I., S. Son, H. C. Lin, and L. S. Li. "Synthesis of 2-Dimensional Polymers." *Science* 259, no. 5091 (January 1, 1993): 59-63.

Stupp, S. I., S. Son, L. S. Li, H. C. Lin, and M. Keser. "Bulk Synthesis of 2-Dimensional Polymers – The Molecular Recognition Approach." *Journal of the American Chemical Society* 117, no. 19 (May 17, 1995): 5212-5227.

## Electrochemical Polymerization

Okahata, Y., and G. Enna. "Permeability-Controllable Membranes. 7. Electrochemical Responsive Gate Membranes of a Multilayer Film Containing a Viologen Group as Redox Sites." *Journal of Physical Chemistry* 92, no. 15 (July 28, 1988): 4546-4551.

### Self-Assembly of Viruses and Liquid Crystalline Polymers

Percec, V. "Self-Assembly of Viruses as Models for the Design of New Macromolecular and Supramolecular Architectures." *Journal of Macromolecular Science-Pure and Applied Chemistry* A33, no. 10 (1996): 1479-1496.

Percec, V. "Bioinspired Supramolecular Liquid Crystals." *Philosophical Transactions of the Royal Society A-Mathematical Physical and Engineering Sciences* 364, no. 1847 (October 15, 2006): 2709-2719.

## Multilayer Assembly

Hammond, P. T. "Form and Function in Multilayer Assembly: New Applications at the Nanoscale." *Advanced Materials* 16, no. 15 (August 3, 2004): 1271-1293.