

## Faculty Profile

 

### ■ Faculty Directory

## Henry Hall

Professor Emeritus - Retired

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### Education and Appointments

- B.S. 1944, Polytechnic Institute of Brooklyn
- M.S. 1946, Pennsylvania State University
- Ph.D. 1949, University of Illinois

### Research Interests

- Organic
- Materials and Polymer Chemistry

## Research Summary

### Organic Monomer and Polymer Chemistry

High polymers are the basis of fibers, films, rubbers, etc. in modern life. Our group is engaged in the study of polymerization mechanisms and the synthesis of new monomers for polymerization studies. These studies are a mixture of synthetic organic chemistry, physical organic chemistry and polymer chemistry.

Specific current fields of research include:

- the study of the mechanism of spontaneous polymerizations in systems containing electron-rich and electron-poor olefins or dienes;
- synthesis and polymerization of substituted bicyclobutanes and cyclobutenes;
- study of the mechanism of polyarylate polymerization; and
- design and synthesis of photorefractive and nonlinear optically active polymers.

## Selected Publications

- Padias, Anne Buyle; Hall, H. K., Jr.. "Mechanism studies of LCP synthesis." *Polymers (Basel, Switzerland)* (2011), 3(2), 833-845.
- Hall, H.K., Jr.; Padias, Anne Buyle. "A paradigm for the mechanisms and products of spontaneous polymerizations." *Journal of Polymer Science, Part A: Polymer Chemistry* (2009), 47(24), 6735-6749.
- Hall, H. K. Jr.; Padias, Anne B.; Boone, Harold W. "Condensation routes to polyaniline and its analogs." *Journal of Polymer Science, Part A: Polymer Chemistry* (2007), 45(21), 4751-4763.
- Elandaloussi, El Hadj; Somogyi, Arpad; Padias, Anne Buyle; Bates, Robert; Hall, H. K.,

Jr.. "Resequencing of Comonomer Units of Well-Defined Vectra Oligomers during MALDI-TOF Mass Spectral Measurements." *Macromolecules* (2006), 39(20), 6913-6923.

- Wang, Hua; Padias, Anne Buyle; Hall, H. K. Jr. "Photocopolymerization of Methyl Vinyl Keotne with Acrylonitrile by Direct Monomer Irradiation." *Polymer Bulletin (Heidelberg, Germany)* (2006), 57(4), 457-461.
- Hall, H.K., Jr.; Padias, Anne Buyle. "The relationship of cycloaddition reaction to spontaneous vinyl polymerizations." *Helvetica Chimica Acta* (2005), 88(6), 1553-1559.

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