

75th Prague Meeting on Macromolecules

CONDUCTING POLYMERS

Formation, structure, properties, and applications

PRAGUE, Czech Republic, 10–14 July 2011

Symposium organizers: Jaroslav Stejskal, Miroslava Trchová

SCOPE

Conducting polymers are studied because of their conductivity, as functional materials, and for their ability to respond to external stimuli. Polyaniline and polypyrrole are typical but by no means the only conducting polymers. They are investigated alone, or as components of compound materials.

The synthesis of conducting polymers and the preparation of their composites, their structural characterization, their physical and chemical properties, and their applications both in well-established and new surprising directions are of interest.

TOPICS

Chemical and electrochemical synthesis of conducting polymers, the control of molecular structure and supramolecular morphology. Preparation of thin films, colloidal particles, and coatings. Composite materials comprising conducting polymers, combinations of conducting polymers with noble metals, carbons, and other inorganic and organic components. Related oligomers. The chemical modification and carbonization of conducting polymers. Processing of conducting polymers and their stability.

Characterization of conducting polymers by spectroscopic methods. Modelling and simulations. Molar masses and molecular architecture. Electrical, magnetic, mechanical, optical and other physical properties of conducting polymers. Charge transport. Chemical properties of conducting polymers. The relations between the chemical and physical properties of conducting polymers.

Applications of conducting polymers as conducting materials, e.g., in flexible electronics. The use of conducting polymers in corrosion protection, in electrorheology. Conducting polymers in energy conversions, as electrode materials in fuel cells,

batteries, and supercapacitors. The design of analytical devices, sensors, and actuators. The role of conducting polymers in catalysis and electrocatalysis, separation science and membrane technologies, in biomedical applications and other fields.

VENUE

Institute of Macromolecular Chemistry, Academy of Science of the Czech Republic, Heyrovsky Sq. 2, 162 06 Prague 6, Czech Republic

SCIENTIFIC PROGRAM

Lectures. The scientific program will include about seven invited lectures and a series of contributed oral presentations. Those participants who wish to present a lecture should submit a brief summary with the preliminary registration card to the PMM Secretariat. Detailed information will be given in the Microsymposium circulars.

Poster communications. Two poster sessions are planned. Maximum two posters per participant are allowed.

SOCIAL PROGRAM

The participants will have the opportunity to relax and enjoy Prague. An excursion to the Prague surroundings will be organized. All participants will be invited to take part in social events.

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