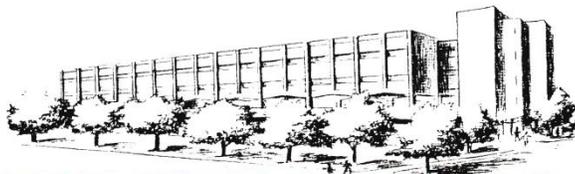


UNIVERSITY OF CONNECTICUT



**INSTITUTE OF MATERIALS SCIENCE**

## **POLYMER PROGRAM SEMINAR**

**“Dynamic and Redox-Responsive  
Branched Polymers”**

**Prof. Nicolay V. Tsarevsky  
Southern Methodist University**

**Friday, October 14, 2016  
11:00 AM, IMS Room 20**

### **ABSTRACT**

Highly branched polymers with functionalities placed at specific locations (e.g., the backbone as pendant groups, the branching points, or the chain ends) are of interest in many fields: from coatings and adhesives to catalysis, to drug delivery and imaging. Various synthetic methodologies will be described that enable the efficient preparation of highly branched polymers containing functional groups able to undergo ligand exchange or electron exchange (redox) reactions. The techniques that will be illustrated include i) the radical copolymerization of crosslinkers under controlled/“living” radical polymerization conditions, or in the presence of efficient chain transfer agents or large concentrations of radical precursors (e.g., hypervalent iodine compounds), ii) the (co)polymerization of functional “inimers” (compounds containing both polymerizable and initiating moieties), and iii) “click”-type (e.g., thiol-ene) reactions. Applications of the described materials will also be presented.

*\*For bio, please see next page*



## Nicolay V. Tsarevsky

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Nick Tsarevsky obtained M.S. degree in theoretical chemistry and chemical physics in 1999 from the University of Sofia, Bulgaria, and Ph.D. degree in chemistry in 2005 from Carnegie Mellon University working with Prof. Kris Matyjaszewski. He was Visiting Assistant Professor at the Department of Chemistry at Carnegie Mellon University (2005-6), and a member of the founding team of ATRP Solutions, Inc., of which he served as Chief Science Officer (2007-2010). He joined the Department of Chemistry at Southern Methodist University in the summer of 2010. He has authored and coauthored 87 peer-reviewed journal articles and book chapters, 1 textbook, and has served as the co-editor of 5 books. He received several awards including, recently, an IUPAC Young Observer Fellowship and an NSF CAREER award. Research interests include polymerization techniques, functional materials, particularly ones with biomedical applications, coordination chemistry and catalysis, and the chemistry hypervalent compounds.

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