Martin-Luther-Universität Halle-Wittenberg
Naturwissenschaftliche Fakultät II
Chemie und Physik
SFB/ TRR 102

POLYMER- UND SOFT-MATTER-KOLLOQUIUM

am Dienstag, dem 06.12.2011, 17.15 Uhr,

~~„Gustav Mie“ Hörsaal, Theodor – Lieser - Str. 9,~~ 06120 Halle
neuer Raum: Von-Danckelmann-Platz 4, Raum 1.27

Es spricht:

Prof. Pierre Lutz
Institut Charles Sadron,
CNRS University of Strasbourg

zum Thema:

“Complex Macromolecular Architectures Based on Macromonomers: From Coordination Polymerization to Grafting via Hydrosilylation onto Silsesquioxanes”

Abstract:

The presentation discusses the ability of well-defined ω-functional polystyrene (PS) or poly(styrene-*b*-isoprene) (PS-*b*-PI) macromonomers to undergo coordination homo (or copolymerization with ethylene) in the presence of selected coordination catalysts. Special emphasis is given to the influence of the nature of the catalyst, the polymerization temperature, the macromonomer molar mass and the concentration on the polymerization yield and average degree of (co-)polymerization. The use of the homogeneous metallocene catalyst with constrained ligand geometry (CGC-Ti/MAO) having an open active site, significantly improved the degree of polymerization. The same macromonomers were reacted by hydrosilylation with octafunctional silsesquioxanes fitted with antagonist SiH functions. The resulting products were characterized by SEC, IR and by static light scattering. Well-defined octafunctional PS, PS-*b*-PI and PEO star-shaped polymers could be obtained. The micellar properties of PS-*b*-PI hybrid stars were examined in selective solvents for the PI or PS component.