

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



SFB/TRR 102-KOLLOQUIUM

am Donnerstag, dem 24.05.2012, 17.00 Uhr,
Theoretischer Hörsaal im Physikalischen Institut ,
Linnéstraße 5, 04103 **Leipzig**

Es spricht: **Prof. Dr. Jürgen Rabe**
Physik von Makromolekülen, Institut für Physik
Humboldt Universität zu Berlin

zum Thema:

**“Molecularly defined soft nano-tubes and slit-pores -
how to make and how to use them”**

Abstract:

Molecularly defined tubular J-aggregates of amphiphilic cyanine dyes [1] and soft nanoscopic slit-pores from mica and graphene [2] provide versatile platforms to correlate structure, dynamics and optoelectronic properties of low dimensional molecular systems. Upon filling the nanopores, optoelectronically active organic-inorganic hybrid systems can be obtained, such as semiconducting or metallic nanowires within a molecular nanotube or monomolecular fluids within a soft inorganic slitpore. Recent results will be discussed, including the excitonic coupling between two concentric dye nanotubes as well as energy and charge transfer in the slit-nanopores filled with molecules.

[1] D.M. Eisele, J. Knoester, S. Kirstein, J.P. Rabe, D.A. Vanden Bout,
Nature Nanotechnology **4** (2009) 658.

[2] N. Severin, P. Lange, I.M. Sokolov, J.P. Rabe, *Nano Lett.* **12** (2012) 774.

