

Functional polymer nanotubes by wetting of ordered porous templates: a platform for innovative applications

Initiative: Komplexe Materialien (beendet)

Bewilligung: 01.04.2004

Laufzeit: 3 Jahre

The project intends to exploit wetting processes to prepare polymer nanotubes for nanocapsules or nanomechanical devices in the area of drug release and more specifically in the area of inhalation. For this purpose, bio-erodible polymer nanotubes with dimension of the order of 50 μm in length and with very high monodispersity are required in large quantities. The novel process of wetting-assisted templating allows for the first time to prepare these kinds of nanostructures with very high precision. However, the dependence of the wetting phenomena on the solvents and on the molecular weight of the polymers, their selective removal from the template and their aggregation are not yet understood and will be addressed in this project.

Projektbeteiligte

Prof. Dr. Ralf Wehrspohn

Universität Halle-Wittenberg
Naturwissenschaftliche Fakultät II
Institut für Physik
Fachgruppe für Mikrostrukturbasiertes
Materialdesign
Halle

Prof. em. Dr. Joachim H. Wendorff

Universität Marburg
FB Chemie
Institut für Physikalische Chemie, Kernchemie
und Makromolekulare Chemie
Marburg

Prof. Dr. Andreas Greiner

Universität Marburg
Fachbereich Chemie
Makromolekulare Chemie
Marburg

