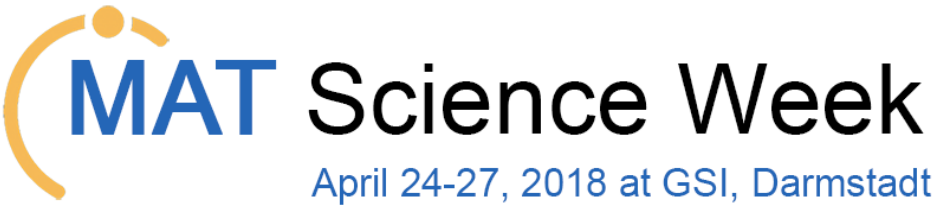

Beitrag ID: **3** Typ: **Oral**

(Bio)molecular detection with track-etched single synthetic ion channel

Mittwoch, 25. April 2018 10:05 (20 Minuten)

Solid-state nanofluidic pores have been attracting considerable attention of scientific community because of their structural and chemical resemblance with biological ion channels for mimicking biological process in living systems. Compared to ion channels, synthetic nanopores exhibit high stability, control over pore dimensions (size and geometry) and their surface chemical properties can be tuned on demand. Therefore, they are considered perfect candidate to design and develop of nanofluidic sensory devices by introducing variety of functional groups on the inner pore surface for the detection of specific analyte (biomacromolecules/ chemicals) through host-guest interactions. The biomolecular recognition processes taking place in confined geometries results in the partial/complete blockage of the pore and/or modulation of pore surface charge polarity. Here, I will present our recent progress in the design and construction of nanofluidic sensory devices based on polymeric track-etched nanopores for the recognition of various (bio)molecular analytes.

Autor: Dr. ALI, Mubarak (Technische Universität(TUDA))

Co-Autoren: Dr. NASIR, Saima (technische Universität Darmstadt); Prof. ENSINGER, Wolfgang (Technische Universitaet Darmstadt)

Vortragende(r): Dr. ALI, Mubarak (Technische Universität(TUDA))

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