

סמינר - SEMINAR

הנדך מוזמנת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתקיים ביום ב' 14.05.2018 (כ"ט באייר, תשע"ח), בבניין דן קאהן, אודיטוריום 1, 14:30.

מרצה:

Prof. Jan Eijkel

University of Twente, Netherland

על הנושא:

Nanofluidics: observed phenomena, (tentative) explanations and applications

The seminar will be given in English

להלן תקציר ההרצאה:

The talk will start with a brief overview of the research activities of the BIOS/Lab on a Chip group at the University of Twente. It will continue with a focus on nanofluidics. It will present an overview of some phenomena that we observed in nanofluidic systems, discuss their interpretation and present their application in Lab on a Chip systems.

Examples will be related to several areas of physical chemistry. Surface protonation will be shown to play an important role. It can cause transient pH changes in filling nanochannels, which can be actively controlled for pH actuation and passively for potentiometric sensing. The wettability of nanochannel walls can lead to surprising filling and drying dynamics. DNA transport in nanochannels can be influenced by strong interactions with the wall, leading to a strong field-dependent mobility. Finally, we will show that the kinetic energy of microjetted droplets can be harvested as electrical energy with surprisingly high efficiency.

מארח: פרופ' ח מורן ברקוביץ'

בברכה,

ד"ר איתן סאס

מרכז הסמינרים