

演 題 : "Nanotribology using AFM"

講 師 : Prof. Mark Rutland

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日 時 : 2011 年 10 月 13 日 (木) 15:00~16:00

場 所 : 工学部材料化学棟 MC102

has been changed to MC208



Over the last 10 years or so we have studied the relationship between surface forces and friction. How do the forces measured on approach affect the frictional response of a contact? We consider mainly aqueous systems which range from how ink particles are separated from paper during recycling, to the forces between two surfaces in the presence of saliva. The manufacture of a novel, dual responsive polymer brush is described and the corresponding changes in friction which are observed as the conformation of the brush changes are described. How does polyelectrolyte adsorption affect frictional forces. Can the structuring of Ionic liquids be used to mediate friction? Finally, can we understand the tribology of hair fibres using AFM – and see how shampoo /conditioner affects interactions?

1. 本講演会および Prof. Rutland による 4 回の講義に全参加し(集中講義・別紙参照)、レポートを提出すると「先端総合化学特論 II (Modern Trends in Chemical Sciences and Engineering II)」の 1 単位が認定されます。

2. 上記とは別に、本講演会は「化学研究先端講義 (Topical Lectures in Chemical Sciences & Engineering) / 総合化学特別研究第二(Research in Chemical Sciences & Engineering II)」の一部として認定されています。

3. 出席回数は上記 1.2.どちらかの科目でのみのカウントとなります。

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