

特別講演 (Special Lecture)の御案内

ニューヨーク州立大学バッファロー校 生物/化学工学科のP. Alexandridis先生は、各種ポリマー(ブロックコポリマー、ポリ電解質ほか)から創成される自己組織化構造の研究に取り組む第一線の研究者です。今回は、ポリマー自己組織系の基礎から応用(材料調製)に至る成果を御講演頂く予定です。



日時：2016年12月21日(水) 13:00-15:00

場所：C棟 4F セミナー室

演者：Dr. Paschalis Alexandridis

Distinguished Professor

Dept. of Chem. and Biol. Eng.

Univ. at Buffalo (UB) - State Univ. of N.Y. (SUNY)

“Pharmaceutical Formulations based on Poloxamers: Function through Molecular Self-Assembly and Directed Assembly”

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Pharmaceutical Formulations based on Poloxamers: Function through Molecular Self-Assembly and Directed Assembly

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Amphiphilic polymers of the poly(ethylene oxide)-block-poly(propylene oxide) (PEO-PPO) family, commercially available as Pluronics or Poloxamers and approved for pharmaceutical use [Gu & Alexandridis, *J. Pharm. Sci.* 2004, **93** (6), 1454-1470; DOI: 10.1002/jps.20021], offer prime examples of self-assembling systems that find diverse applications. The presentation will utilize research findings from our group and others to highlight how the fundamental aspects of Poloxamer block copolymer micellization [Kaizu & Alexandridis, *Colloids Surfaces A* 2015, **480**, 203-213; DOI: 10.1016/j.colsurfa.2014.10.061] and lyotropic liquid crystal formation and nanostructure [Sarkar et al., *Macromol. Chem. Phys.* 2012, **213** (23), 2514-2528; DOI: 10.1002/macp.201200438] in aqueous media, inform the formulation of Poloxamers applied to stabilizing oil-in-water emulsions [Kaizu & Alexandridis, *J. Colloid Interface Sci.* 2016, **466**, 138-149; DOI: 10.1016/j.jcis.2015.10.016] and colloidal dispersions [Bodratti et al., *Adv. Colloid Interface Sci.* 2016; DOI: 10.1016/j.jcis.2016.09.003], and to forming stable “frozen” micellar nanoparticles with high loading of actives for drug delivery [Zhang et al., *Nature Commun.* 2016, **7**, 11649; DOI: 10.1038/ncomms11649] and imaging [Zhang et al., *Nature Nanotech.* 2014, **9** (8), 631-638; DOI: 10.1038/nnano.2014.130].