
The 24th iCeMS SEMINAR

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講演者： 玉野井 冬彦 教授

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演 題： Use of Mesoporous Silica Nanoparticles for
Controlled and Targeted Release of Anticancer Drugs

場 所： 京都大学 iCeMS コンプレックス 1
本館 2 階 セミナールーム (A207)

Mesoporous silica nanoparticles (MSNs) with a diameter of approximately 130 nm and containing more than 1400 pores have been used to develop mechanized nanoparticles suitable for targeted delivery and controlled release of anticancer drugs. These nanoparticles can be easily synthesized by the sol-gel method. Their pore interior can be modified by the addition of azobenzene conferring light sensitive property to expel stored anticancer drugs on command. Nanovalves can be attached to the pore openings to provide controlled release. MSNs with iron oxide core for MRI detection as well as PEI-modified MSNs for the delivery of siRNA have also been synthesized. Use of these novel nanomaterials in cells and in mice will be discussed.

主 催： 京都大学 物質-細胞統合システム拠点 (iCeMS = アイセムス)
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