

学术报告

题目: Hybrid Nanostructures as
Critical Elements in Energy,
Environment, Sensing and
Light Emission

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时间: 10月27日(周一) 上午9:00-11:00

地点: 卢嘉锡楼二楼会议室(215)

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固体表面物理化学国家重点实验室
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10月23日

Hybrid Nanostructures as Critical Elements in Energy, Environment, Sensing and Light Emission

Dong Ha Kim

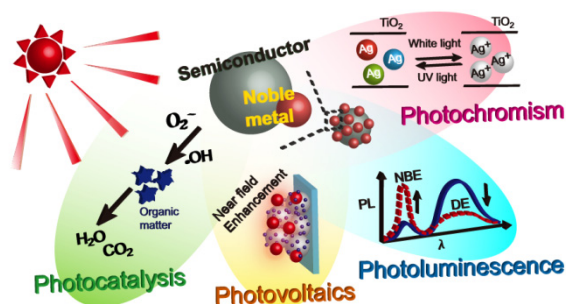
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Abstract:

In the Polymer Nanohybrid Materials at Ewha Womans University, a comprehensive approach for the design and synthesis of multifunctional hybrid nanomaterials has been systematically performed to seek their potential applications as key elements in green nano- and bio-technology. Representative subject areas of interest include energy conversion and storage, environmental remediation, optical (bio-)sensing, light-emission, and memory devices. Of the numerous methodologies to achieve these goals, we actively utilize *complementary self-assembly* processes to construct well-defined hybrid nanoscopic objects suitable for target-oriented applications. Recently, we also pay special attention to *surface plasmons* as a versatile platform,^{1,2} based on which target-oriented properties can be obtained by integrating plasmonic nanostructures into the elements of optical (bio-)sensors, photovoltaic devices, photocatalysts, and light-emitting materials. In this talk, I'll introduce our recent activities with a special focus on the synthesis and applications of active nanomaterials for highly selective/sensitive sensing, plasmonic dye-sensitized solar cells, visible light active photocatalysis, and enhanced fluorescence.



Keywords: hybrid carbon, surface plasmon, solar cell, photocatalysis, fluorescence, sensing

References

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