

# Transformable Nanostructures of Luminescent Platinum-Containing Organosilane Hybrids: Non-Covalent Self-Assembly of Polyhedral Oligomeric Silsesquioxanes Assisted by Pt...Pt and $\pi$ - $\pi$ Stacking Interactions of Alkynylplatinum(II) Terpyridine Moieties

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A luminescent alkynylplatinum(II) terpyridine complex functionalized with polyhedral oligomeric silsesquioxanes (POSS) moieties has been demonstrated to exhibit self-association behavior to give different luminescence properties as well as various distinguishable nanostructures with interesting morphological transformation from rings to rods in response to solvent conditions through the stabilization of Pt...Pt and  $\pi$ - $\pi$  stacking interactions as well as hydrophobic-hydrophobic interactions. These changes can be systemically controlled by varying the solvent composition and have been studied by <sup>1</sup>H NMR, electron microscopy, UV-vis absorption and emission spectroscopies.

1 Au-Yeung, H.-L.; Leung, S. Y.-L.; Tam, A. Y.-Y.; Yam, V. W.-W. *J. Am. Chem. Soc.*, **2014**, 136 (52), 17910.

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