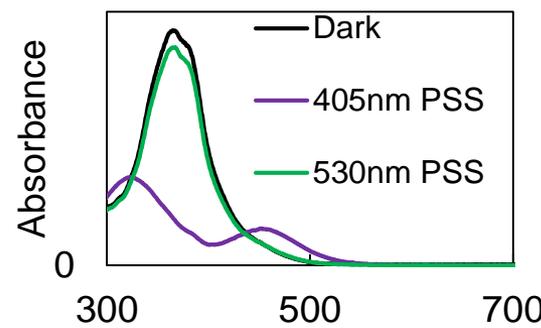
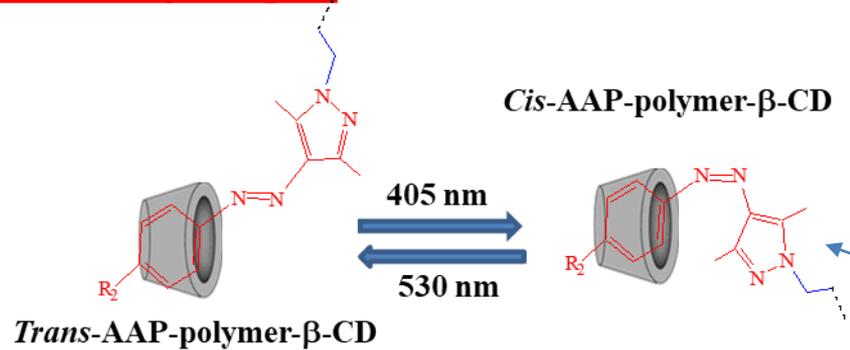


Hampton PREM Research Highlight

Development of Metal-ion Mediated Visible-Light Responsive Metallogels and Supramolecular Host-Guest Hydrogels

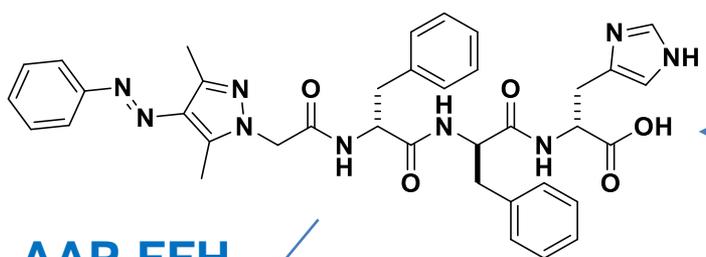


Reversible UV-vis spectra of host-guest hydrogels



Host-guest hydrogel self-assembly

Host-guest hydrogel self-assembly



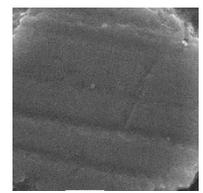
Peptide based Soft materials

AAP-FFH

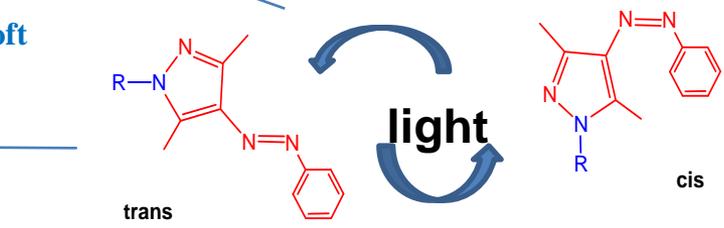
Zn²⁺-ion triggered peptide based metallogel assembly



AAP-FFH Zn²⁺ gel



SEM Images of AAP-FFH Zn²⁺ gel

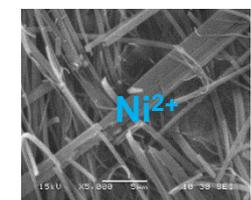
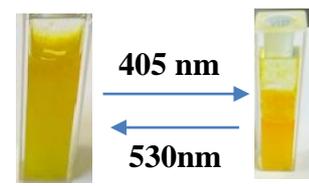


Visible-Light responsive arylazopyrazoles (AAPs)

Visible-light-responsive Acid based Metalgels



Photo-induced gel-to-sol transition



This work was supported by PREM NSF# DMR1827820

Hampton PREM Research Highlight

Materials Development & Spectroscopy of Pr doped CsPbCl₃ perovskite for IR Photonics

Material Development

Zone-refinement

PbCl₂



CsPbCl₃



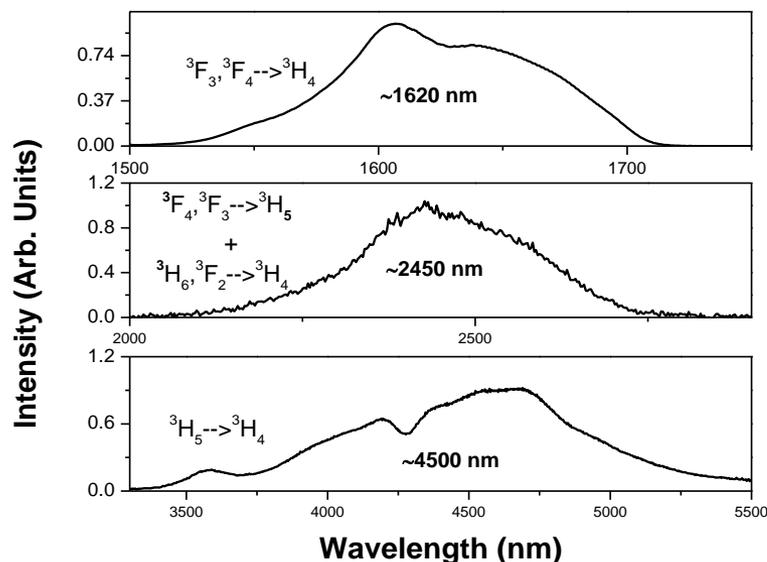
Bridgman growth



Pr: CsPbCl₃



IR emission spectroscopy



Main achievement:
Functionalized CsPbCl₃ Perovskite for IR-photonics through Pr³⁺ doping.

Identified 3 IR emission bands:

~1620nm

~2440nm

~4500nm

This work was supported by PREM NSF# DMR1827820