

## Science Bridges China Research Profile

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### SUMMARY OF MY RELEVANT RESEARCH AREAS:

*Biodegradable and biomedical polymer materials; Self-assembly of block copolymer; Application of Porous Polymers*

生物可降解医用高分子材料；嵌段聚合物的自组装；多孔聚合物的应用研究

### Primary Research interests:

My main research areas include two aspects. First is developing biodegradable and biomedical polymer materials for using in drug delivery and tissue engineering. The drug release could be controlled by tumor microenvironment. Recently, much more attention was focus on the polymersomes for delivery of protein drugs. Another is the synthesis and application of porous polymers, including cross-linked polymers, covalent organic framework and conjugated polymers. These porous polymers are mainly used in catalysis.

### Topics in which you would like to develop collaborative research:

The nano-scale particles formed by biodegradable polymers, used as delivery carrier for water-soluble drug, including vaccines, peptides, protein and RNA.  
Porous nanoparticles are used potentially in catalysis and chemical or biosensor.

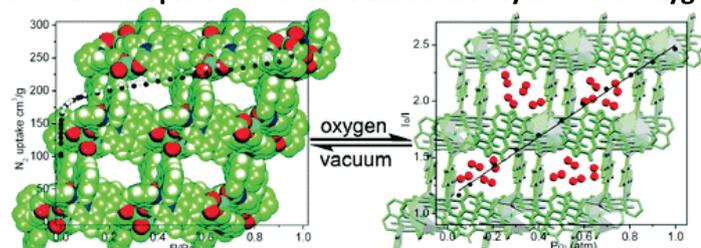
Relevant existing collaborations (academic/clinical/commercial) inside or outside China.

None.

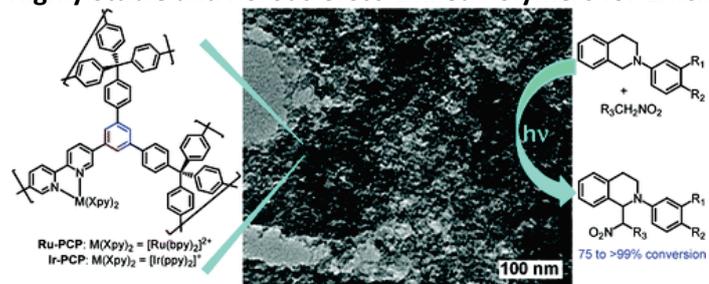
Relevant graphics, figures, pictures:

Use this area to show pictures or scientific figures which illustrate your research

### Porous Phosphorescent Coordination Polymers for Oxygen Sensing



### Highly Stable and Porous Cross-Linked Polymers for Efficient Photocatalysis



Publications and other outputs relevant to your interest in this programme (up to 5)

Please give references to your key recent research publications

1. High stable and porous cross-linked polymers for efficient photocatalysis, *J. Am. Chem. Soc.*, 133, 2056-2059 (2011).
2. BODIPY photocatalyzed oxidation of thioanisole under visible light, *Catalysis. Communications.*, 16 (2), 94-97 (2011).
3. Porous phosphorescent coordination polymers for oxygen sensing, *J. Am. Chem. Soc.*, 132, 922-923 (2010).
4. Synthesis and characterization of novel biodegradable poly(carbonate ester)s with photolabile protecting groups, *Biomacromolecules*, 9, 376-380 (2008).
5. A novel polymer-paclitaxel conjugate based on amphiphilic triblock copolymer, *J. Controlled. Release.*, 117, 210-216(2007).