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UK-CHINA amri
Advanced Materials Research Institute

Science Bridges China Research Profile

Name: **Dujin Wang**
Position: **Professor**
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SUMMARY OF MY RELEVANT RESEARCH AREAS:

Polymer morphology and processing

高分子形态和加工

Primary Research interests:

Focus on the basic research of polymer materials, blends and composites:

- *Polymer crystallization behavior, orientation induced structure variation, polymer blending andprocessing,*
- *crystallization and self-assembly of alkanes and alkyl side chain-branched polymers (crystallization/melting of normal alkanes in confined geometry and their application in energy storage and phase change materials, conformational variation and crystalline transition of alkyl side chains modulated with main chain rigidity and side chain length),*
- *Controlled crystallization of calcium carbonate/hydroxyapatite with organic and polymeric additives,*
- *Fiber reinforced thermal polymer based composites,*
- *Modification and characterization of biodegradable polymers*

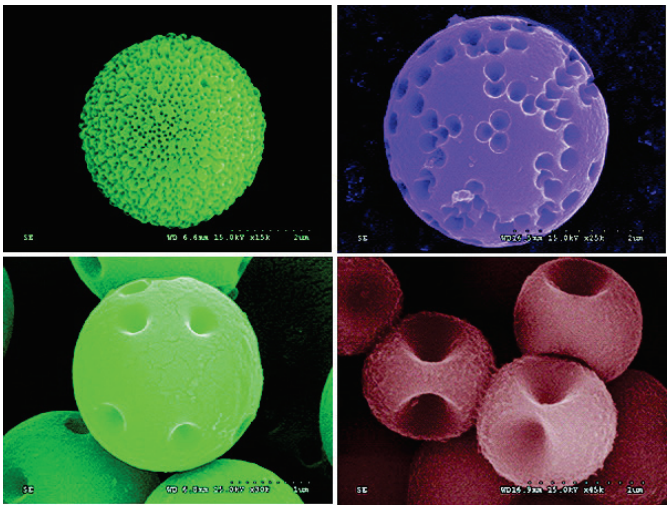
Topics in which you would like to develop collaborative research:

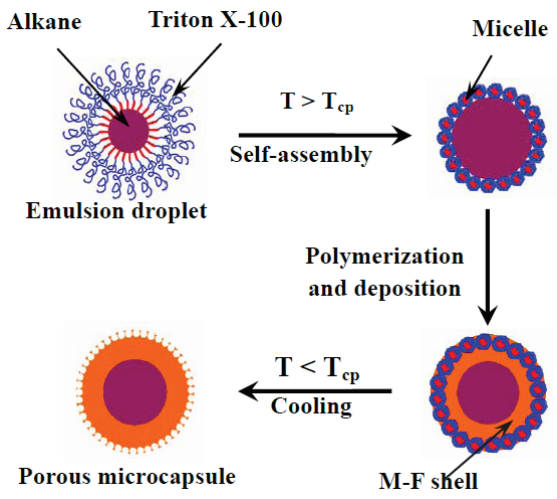
- **Structure evolution of polymer materials under deformation,**
- **In-situ preparation of biominerals controlled by organic or polymeric matrices**

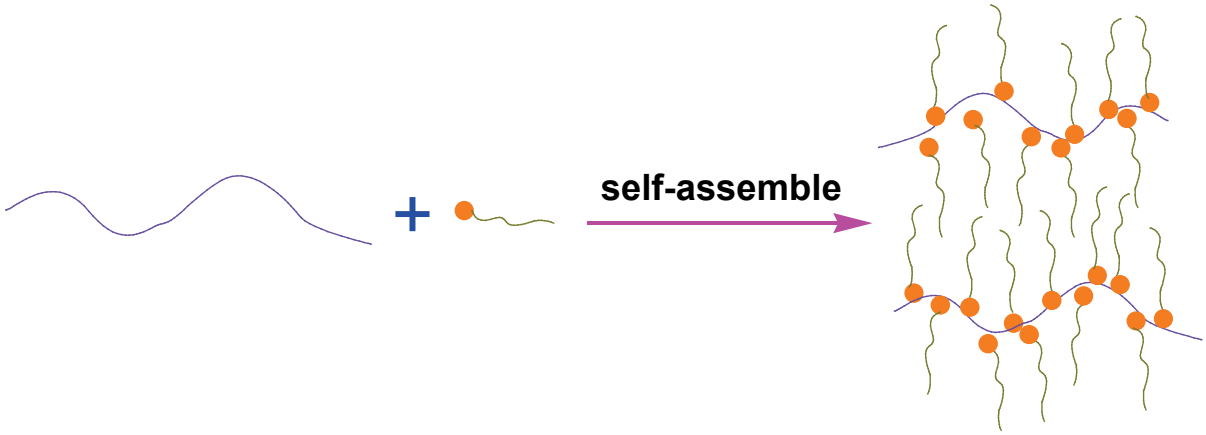
Relevant existing collaborations (academic/clinical/commercial) inside or outside China.

- Host, Chinese Academy of Sciences Visiting Professorship for Senior International Scientists, Prof. Joachim Loos, Glasgow University, UK, 2010.3-2011.2 (Grant. No. 2009J2-28)
- Research Service Agreement with Dow Chemical Company, Morphology Development in Injection Molded Thermoplastic Olefin (TPO) Based Parts: Effect of Elastomer α-olefin Content (Grant No. AR27524)

Relevant graphics, figures, pictures:







Publications and other outputs relevant to your interest in this programme

1. Preparation of nearly monodisperse microcapsules with controlled morphology by in-situ polymerization of a shell layer. Guoming Liu, Baoquan Xie, Dongsheng Fu, Yang Wang, Qiang Fu, and Dujin Wang*. Journal of Materials Chemsitry, 2009, 19, 6605-6609.
2. Hydrogen-bonded thermostable liquid crystalline complex formed by biodegradable polymer and amphiphilic molecules. Tao Yu, Yong Zhou, Ying Zhao, Kaipeng Liu, Erqiang Chen, Dujin Wang,* and Fosong Wang*. Macromolecules, 2008, 41, 3175-3180.
3. Preparation of surface porous microcapsules templated by self-assembly of nonionic surfactant micelles. Baoquan Xie, Haifeng Shi, Guoming Liu, Yong Zhou, Yang Wang, Ying Zhao, and Dujin Wang*. Chemistry of Materials, 2008, 20, 3099-3104.