

## Research Profile

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Position: Assistant Professor

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### SUMMARY OF MY RELEVANT RESEARCH AREAS:

Brief summary of your research areas, in English *just a short paragraph please*

*Structuring of biodegradable polymers and the composites during the hot-melt processing; controlled drug release*

Brief summary of your research areas, in Chinese *we will translate this for non-Chinese speaking UK participants*

生物降解高分子在加工过程中的形态结构演变，药物控制释放

**Primary Research interests:** *A fuller description of your main research areas.*

*Morphological variation of biodegradable polymers and drugs during the hot-melt processing; design of drug release behaviors; selective distribution of drugs in polymer composites; polymer implants; polymer crystallization; polymer blends and composites*

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

*Please indicate here research areas for which you would like to find partners to undertake joint research.*

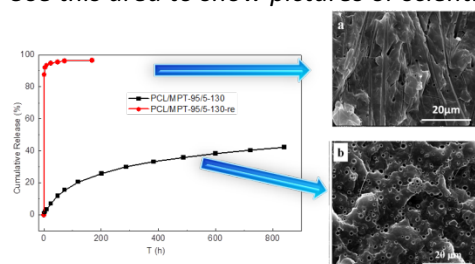
Morphological and structural development of polymer and the blends during the processing; novel manufacture processing for polymer, polymer blends and polymer composites to meet the requirements of drug delivery and tissue engineering applications; medical devices with tailored drug release behaviors

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

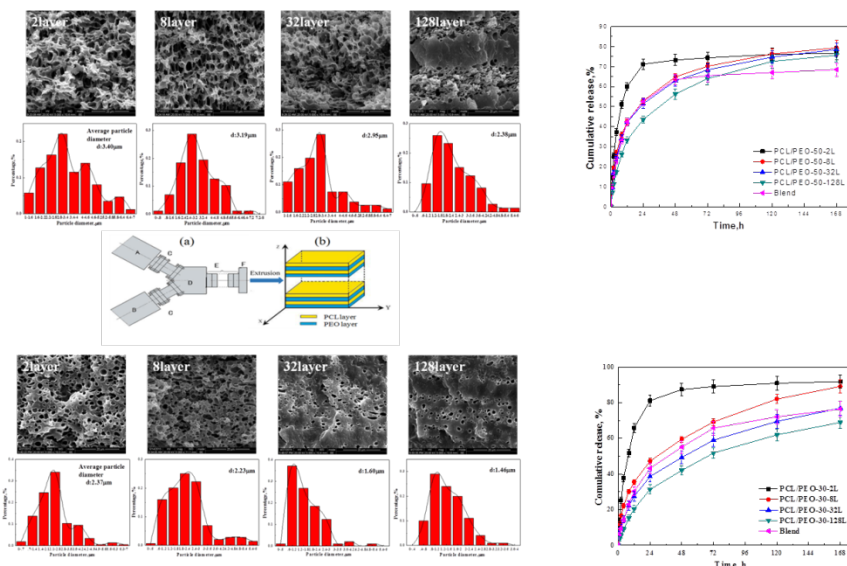
Include here any relevant collaborations you have

**Relevant graphics, figures, pictures:**

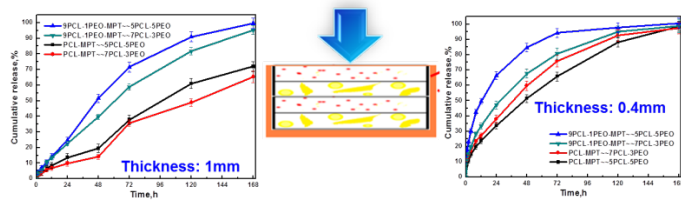
Use this area to show pictures or scientific figures which illustrate your research



Different processing caused different morphology and release behaviors of drugs



Alternating multilayered drug carriers were obtained through co-extrusion, and the drug release was easily adjusted due to the morphology and structure of the composites.



Different distribution and diffusion channels of drugs caused different drug release behaviors.

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

Please give references to your key recent research publications

1. **Rong Chen**, Genlin Li, Aichun Han, Hong Wu\*, Shaoyun Guo\*, Controlled Release of Diclofenac Sodium from Polylactide Acid based Solid Dispersions Prepared by Hot Melt Extrusion, *Journal of Biomaterials Science, Polymer Edition*, 2016, 27: 529-543
2. **Rong Chen**, Haibo Qu, Shaoyun Guo\*, Paul Ducheyne\*, The design and synthesis of a soluble composite silica xerogel and the short-time release of proteins, *Journal of Materials Chemistry B*, 2015, 3: 3141-3149
3. **Rong Chen**, Haibo Qu, Ashwin Agrawal, Shaoyun Guo\*, Paul Ducheyne\*. Controlled release of small molecules from silica xerogel with limited nanoporosity, *Journal of Materials Science: Materials in Medicine*, 2013, 24(1): 137-146
4. Cong Zhang, Xia Chen, Guiting Liu, **Rong Chen**\*, Shaoyun Guo\*, Mechanism And Kinetics Of Drug Release From Poly( $\epsilon$ -Caprolactone) Based Extrudates Prepared By Hot-Melt Extrusion, *Journal of Macromolecular Science Part B-Physics*, 2016, 55(3): 285-298
5. Cong Zhang, Xia Chen, Guiting Liu, Hong Wu, Jiang Li \*, **Rong Chen**\*, Shaoyun Guo, Preparation of alternating multilayered polyethylene oxide /poly( $\epsilon$ -caprolactone) and the confined crystallization of the composites, *RSC Advances*, 2015, 5(120): 98999-99007