

Research Profile

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SUMMARY OF MY RELEVANT RESEARCH AREAS:

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

*Bone/cartilage replacement and regeneration biomaterial;
Wound dress biomaterials
Implant Surface Modification with the Biological responding release properties;
Antibacterial treatment of the biomaterials*

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

骨/软骨替代与再生类生物材料;
伤口护理类生物材料;
植入物表面的生物响应型释放修饰;
植入物的抗菌处理

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

Design and preparation of the bone/cartilage tissue engineering scaffold by 3D printing;
Design and preparation of the novel artificial cervical disc;
Antibacterial guide tissue/ bone regeneration membrane with control release property;
Inflammatory responding surface modification of the artificial cervical disc;
Infection responding surface modification of the artificial joint;

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.

bone/cartilage replacement and regeneration biomaterial and wound dressing biomaterials, especially those needs to translate from bench to clinic.

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

Include here any relevant collaborations you have

Prof. Liqun Zhang's group in Beijing University of Chemical Technology

Relevant graphics, figures, pictures:

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

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

Please give references to your key recent research publications

1. Jiajia Xue; Min He; Hao Liu; Yuzhao Niu; Aileen Crawford; Phil Coates; Dafu Chen; **Rui Shi***; Liqun Zhang*. Drug loaded homogeneous electrospun PCL/gelatin hybrid nanofiber structures for anti-infective tissue regeneration membranes. *Biomaterials*. 2014 Nov; 35(34):9395-405. (**corresponding author**)
2. Jiajia Xue, Min He, Yuanzhe Liang, Aileen Crawford, Phil Coates, Dafu Chen, **Rui Shi***, Liqun Zhang*. Fabrication and evaluation of electrospun PCL-gelatin micro-/nanofibers membrane for anti-infective GTR implant. *Journal of Materials Chemistry B*. 2014, 2, 6867-6877 (**corresponding author**)
3. Jiajia Xue *, **Rui Shi** *, Yuzhao Niu , Min Gong, Phil Coates, Aileen Crawford, Dafu Chen, Wei Tian, Liqun Zhang. Fabrication of drug-loaded anti-infective guided tissue regeneration membrane with adjustable biodegradation property. *Colloids and Surfaces B*. 2015, 135 (1) , 846-854 (*co-first)
4. Jiajia Xue, Min He, Yuzhao Niu, Hao Liu, Aileen Crawford, Phil Coates, Dafu Chen, **Rui Shi***, Liqun Zhang*. Preparation and in vivo efficient anti-infection property of GTR/GBR implant made by metronidazole loaded electrospun polycaprolactone nanofiber membrane. *International Journal of Pharmaceutics*. 2014, 455(1-2): 566-577. (**corresponding author**)
5. **Rui Shi**, Jiajia Xue , Hanbin Wang, Renxian Wang, Min Gong, Dafu Chen, Liqun Zhang, Wei Tian. Fabrication and evaluation of homogeneous electrospun PCL/gelatin hybrid membrane as antiadhesion barrier for craniectomy. *Journal of Materials Chemistry B*. 2015, 3, 4063-4073 (IF=4.726)