

基本信息

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简介

阮长顺，工学博士/副研究员/博士生导师，现任中国科学院深圳先进技术研究院医药所人体组织与器官退行性研究中心生物打印与器官重建课题组负责人(PI)，主要从事生物打印及生物材料等相关领域研究。2015 年入选深圳市高层次留学回国人才计划“孔雀计划 C 类”；2015 年入选广东省科技创新青年拔尖人才；2018 年入选中国科学院青年创新促进会会员。先后主持国家自然科学基金 2 项，广东省科技项目 2 项及深圳市科技创新项目 4 项；作为核心人员参与国家重点研发计划、中国科学院先导 A 类战略性先导科技器官重建与制造专项等；在生物材料领域发表 SCI 收录论文 40 余篇，其中一作或者通讯论文 21 篇，包括领域优秀期刊：*Advanced Functional Materials* (IF=15.621)、*Advanced Science* (IF=15.804) 及 *Biomaterials* (IF=10.273) 等；申报中国发明专利 30 余项，国际 PCT 专利 3 项，获发明专利授权 12 项；合著出版生物材料领域英文专著 1 本；兼任中国医促会骨科分会生物材料组、中国生物材料协会医用金属材料分会青年委员会及中国医药生物技术协会 3D 打印分会委员。

社会任职

中国医促会骨科分会生物材料组、中国生物材料协会医用金属材料分会青年委员会及中国医药生物技术协会 3D 打印分会委员

获奖及荣誉

2015 年入选广东省科技创新青年拔尖人才；2015 年入选深圳市孔雀人才 C

类; 2018 年入选中科院青年创新促进会会员

学科类别

生物医学工程; 生物材料

研究方向

生物打印; 生物材料 (高分子或凝胶类); 组织再生与修复

承担科研项目情况

国家自然科学基金; 国家重点研发计划; 广东省科技创新公益基金; 深圳市科创委基础布局等。

主要代表论著

- [1] Lin Zifeng, Wu Mingming, He Huimin, Liang Qingfei, Hu Chengshen, Zeng Zhiwen, Cheng Delin, Wang Goucheng, Chen Dafu,* Pan Haobo,* and **Ruan Changshun***. 3D Printing of Mechanically Stable Calcium-Free Alginate-Based Scaffolds with Tunable Surface Charge to Enable Cell Adhesion and Facile Biofunctionalization, *Advanced Functional Materials*, 2019, 1808439. (IF=15.621, 内封面文章)
- [2] Gao Fei , Xu Ziyang , Liang Qingfei, Li Haofei, Peng Liuqi , Wu Mingming , Zhao Xiaoli , Cui Xu, Ruan Changshun * and Liu Wenguang*.Osteochondral Regeneration with 3D-Printed Biodegradable High-Strength Supramolecular Polymer Reinforced-Gelatin Hydrogel Scaffolds, *Advanced Science*. 2019, 1900867. (IF=15.804)
- [3] Yufei Ma[#], Nan Hu[#], Juan Liu[#], Xinyun Zhai, Mingming Wu, Chengshen Hu, Long Li, Yuxiao Lai, Haobo Pan, William Weijia Lu, Xinzhou Zhang, Yanfeng Luo,*and **Changshun Ruan***,Three-Dimensional Printing of Biodegradable Piperazine-Based Polyurethane-Urea Scaffolds with Enhanced Osteogenesis for Bone Regeneration, *ACS Appl. Mater. Interfaces*, 2019, DOI: 10.1021/acsami.8b20323. (IF=8.097)
- [4] Gao Fei , Xu Ziyang, Liang Qingfei, Liu Bo, Li Haofei, Wu Yuanhao, Zhang Yinyu, Lin

- Zifeng, Wu Mingming, **Ruan Changshun***, Liu Wenguang*, Direct 3D Printing of High Strength Biohybrid Gradient Hydrogel Scaffolds for Efficient Repair of Osteochondral Defect, *Advanced Functional Materials*, 2018, 1706644. (IF=15.621)
- [5] Xie Hanhan , Shao Jundong, Ma Yufei, Wang Jiahong, Wang Hao, Yang Na, Wang Huaiyu, **Ruan Changshun***, Luo Yangfeng, Wang Ququan, Chu K. Paul, Yu Xuefeng*, Biodegradable near-infrared photo responsive shape memory implants based on black phosphorus nanofillers, *Biomaterials*, 2018,164: 11-21.(IF=10.273)
- [6] Zhai Xinyun, **Ruan Changshun***, Ma Yufei, Cheng Delin, Wu Mingming, Liu Wenguang, Zhao Xiaoli, Pan Haobo*, Lu Weijia William*, 3D-bioprinted Osteoblast-laden Nanocomposite Hydrogel Constructs with Induced Microenvironments Promote Cell Viability, Differentiation and Osteogenesis both In Vitro and In Vivo, *Advanced Science*, 2018, 3:201700550. (IF=15.804, 封面文章)
- [7] Li Bo[#], **Ruan Changshun[#]**, Ma Yufei, Huang Zhifeng, Huang Zhenfei, Zhou Gang, Zhang Jing, Wang Hai, Wu Zhihong, Qiu Guixing. Fabrication of Vascularized Bone Flaps with Sustained Release of Recombinant Human Bone Morphogenetic Protein-2 and Arteriovenous Bundle, *Tissue Engineering: Part A*, 2018, 24(17-18):1413-1422. (IF=3.508)
- [8] Cheng Delin[#], Liang Qinfei[#], Li Yonggang, Fan Jiahui, Wang Guocheng, Pan Haobo , **Ruan Changshun***, Strontium incorporation improves the bone-forming ability of scaffolds derived from porcine bone, *Colloids and Surfaces B: Biointerfaces*, 2018, 162:279–287. (IF=3.997)
- [9] Cai Qingqing, Hu Chengbo, Yang Na, Wang Qingshan, Wang Jianying, Pan Haobo, Hu Yang * and **Ruan Changshun***, Enhanced activity and stability of industrial lipases immobilized onto spherelike bacterial cellulose, *International Journal of Biological Macromolecules*, 2018, 109:1174–1181. (IF=3.909)
- [10] Zhai Xinyun, Ma Yufei, Hou Chunyong, Gao Fei, Zhang Yinyu, **Ruan Changshun***, Pan Haobo, Lu Weijia William*, Liu Wenguang*, 3D-printed high strength bioactive supramolecular polymer/clay nanocomposite hydrogel scaffold for bone regeneration, *ACS Biomaterials Science & Engineering*, 2017, 3 (6):1109-1118. (IF=4.432)

- [11] **Ruan Changshun**#, Hu Nan#, Ma Yufei, Li Yuxiao, Liu Juan, Zhang Xinzhou*, Pan Haobo*, The interfacial pH of acidic degradable polymeric biomaterials and its effects on osteoblast behavior, *Scientific Reports*, 2017, 7:6794. (IF=4.122)
- [12] Cui Xu, Huang Chengcheng, Zhang Meng, **Ruan Changshun***, Peng Songlin, Li Li, Liu Wenlong, Wang Ting, Li Bing, Huang Weihai, Rahaman N.Mohamed, Lu W. William, Pan Haobo*, Enhanced osteointegration of poly (methylmethacrylate) bone cements by incorporating strontium-containing borate bioactive glass, *Journal of the Royal Society Interface*, 2017, 14(131):20161057. (IF=3.355)
- [13] Luo Guilin#, Ma Yufei#, Cui Xu, Jiang Lixin, Wu Mingming, Hu Yang, Luo Yanfeng, Pan Haobo, **Ruan Changshun*** , 13-93 bioactive glass/alginate composite scaffolds 3D printed under mild conditions for bone regeneration. *RSC Advances*, 2017, 7: 11880–11889. (IF=2.936)
- [14] Ma Yufei, Liu Juan, Luo Min, Xing Juan, Wu Jinchuan, Pan Haobo, **Ruan Changshun*** and Luo Yanfeng*.Incorporating isosorbide as the chain extender improves mechanical properties of linear biodegradable polyurethanes as potential bone regeneration materials. *RSC Advances*, 7(2017):13886-13895. (IF= IF=2.936)
- [15] Xing Juan, Ma Yufei, Lin Manping, Wang Yuanliang, Haobo Pan, **Ruan Changshun***, Luo Yanfeng*, Stretching-induced nanostructures on shape memory polyurethane films and their regulation to osteoblasts morphology. *Colloids and Surfaces B: Biointerfaces*, 2016, 146: 431–441. (IF=3.997)
- [16] Luo Yongxiang*, Luo Guilin, Gelinsky Michael, Huang Peng*, **Ruan Changshun***, 3D bioprinting scaffold using alginate/polyvinyl alcohol bioinks. *Materials Letters*, 189 (2017): 295–298. (IF=2.687)
- [17] **Ruan Changshun**†, Zhu Yongjun†, Zhou Xin, Abidi Nouredine, Hu Yang, Catchmark M. Jeffrey. Effect of cellulose crystallinity on bacterial cellulose assembly. *Cellulose*, 2016, 23:3417–3427. (IF=3.809)
- [18] **Ruan Changshun**, Hu Nan, Hu Yang, Jiang Lixin, Cai Qingqing, Wang Huaiyu, Pan Haobo*, Lu W. William, Wang Yuanliang*, Piperazine-based polyurethane-ureas with controllable degradation as potential bone scaffolds. *Polymer*, 55 (2014):1020-1027. (IF=3.483)

- [19] **Ruan Changshun**, Hu Yang, Jiang Lixin, Cai Qingqing, Pan Haobo, Wang Huaiyu, Tunable degradation of piperazine-based polyurethane ureas. *Journal of Applied Polymer Science*, 2014, 131, 40527. (IF=1.901, Invited paper)
- [20] Wang Yuanliang, **Ruan Changshun***, Sun Jiaoxia, Zhang Maolan, Wu Yanglan, Peng Kun, Degradation studies on segmented polyurethanes prepared with poly (D, L -lactic acid) diol, hexamethylene diisocyanate and different chain extenders. *Polymer Degradation and Stability*, 2011, 96:1687-1694. (IF=3.193)
- [21] **Ruan Changshun**, Wang Yuanliang, Zhang Maolan, Luo Yanfeng, Fu Chunhua, Huang Meina, Sun Jiaoxia, Hu Chengbo, Design, synthesis and characterization of novel biodegradable shape memory polymers based on poly (D,L-lactic acid) diol, hexamethylene diisocyanate and piperazine. *Polymer International*, 2012, 61: 524–530. (IF=2.352)