Hongbo Zhang

Gender: male
Date and place of birth: 15.04.1982 in China
Nationality: Chinese
Degree: PhD (Pharmacy)
Home Address: Michailowinkatu 7, As6, 20100, Turku, Finland
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Hongbo Zhang graduated his PhD from Faculty of Pharmacy, University of Helsinki in December 2012 and then he did three years postdoc in Harvard University supervised by Prof. David A. Weitz. He has a multidisciplinary background in pharmacy, nanotechnology, microfluidics, precision medication, bioimaging; and he knows the world leading technologies. In September 2016, he becomes a Tenure track Assistant Professor in Åbo Akademi University and established his own research group. In four years, the group has grown up to 20 people and due to his excellent performance, he became an Associate Professor in November 2018. Dr. Zhang is very active on promoting international collaborations, he has visited China with Vice Rector Niklas Sandler and established an International Research Center between Åbo Akademi University and Ruijin Hospital, affiliated to Shanghai Jiaotong University and he is also appointed as a Guest Professor in Shanghai Jiaotong University. Dr. Zhang also focuses on translational research and University-industry collaboration. He has broad collaborations with hospitals, and he is elected as distinguished medical expert in Jiangsu Province and Oriental Scholar in Shanghai. Now he has received venture capital from China investors to establish the ChinFin Incubator and Innovation Oy, in Turku and he is the Executive Chairman.

EDUCATION

2009-2012 Doctor of Philosophy, Major in Pharmaceutical Chemistry, Faculty of Pharmacy, University of Helsinki, Finland
Contact information of the highest degree:
Viikinkaari 9 (P.O. Box 56), 00014 University of Helsinki
Phone: +358-(0)294 1911
2005-2008 Master of Science, Major in Biotechnology, Institute of Biotechnology, University of Helsinki, Finland
2000-2004 Bachelor of Science, Major in Biology, School of Life Sciences, Fudan University, P. R. China

CURRENT POSITIONS

Current Positions:
November 2018-Present Associate Professor, Department of Pharmaceutical Science, Åbo Akademi University, Turku, Finland
Research focus: Functional materials and microfluidics for biomedical applications. Single cell analysis.

Guest Professor, Ruijin Hospital, Shanghai Jiaotong University, China
Executive President, ChinFin Incubator and Innovation Oy, Turku, Finland

Previous Positions:

September 2016-Present Assistant Professor, Department of Pharmaceutical Science, Åbo Akademi University, Turku, Finland

March 2014 – August 2016 Project Leader, Pharmaceutical Nanotechnology and Chemical Microsystems Unit, Faculty of Pharmacy, University of Helsinki, Finland and Visiting Scholar (4 month in Harvard and 8 month in Helsinki), Experimental Soft Condensed Matter Group, School of Engineering and Applied Sciences, Harvard University, USA.
Group leader: Professor David A. Weitz
Joint Project: Porous Silicon Based Multifunctional Nanoshuttle for Targeted Intracellular Drug Delivery and Cancer Therapy
January 2013 – February 2014 Post-doc Researcher, Pharmaceutical Nanotechnology and Chemical Microsystems Unit, Faculty of Pharmacy, University of Helsinki, Finland
Group leader: Adjunct Professor Hélder A. Santos
Project: Microfluidic Templated Porous Silicon Based Multistage Nanoshuttle for Controlled and Targeted Drug Delivery and Cancer Therapy (Joint project with Harvard University)
February 2009 – December 2012 PhD student (Researcher), Molecular and Biochemical Pharmacology, Faculty of Pharmacy, University of Helsinki, Finland
Supervisors: Professor Jouni Hirvonen and Adjunct Professor Moshe Finel
Project: UGTs and glucuronidation analyses in Caco-2 cells, human microsomes and recombinant enzymes

RESEARCH FUNDING

I am the responsible person of all the following Fundings:
Sigrid Juselius Foundation, 2020-2021, amount 40000 €.
Tor, Joe och Pentti Borgs minnesfond, 2019-2020, amount 69000 €.
Academic of Finland Research Fellow, 2019-2024, amount 900000 €.
Oriental Scholar, Shanghai, China, 2019, amount 20000 €.
Project, National Natural Science Foundation of China, 2019-2022, amount 75000 €.
Key Project, Jiangsu Province, 2019-2022, amount 250000 €.
Distinguished clinical expert, Jiangsu Province, 2018-2021, 125000 €.
Sigrid Juselius Foundation, 2017-2020, amount 120000 €.
Academic of Finland Postdoc Fellow, Health Panel, 2016-2019, amount 279000 €.
Jane and Aalto Foundation three year project, 2015-2018, amount 283000 €.
Biocentrum Helsinki, Connecting Aalto University and University of Helsinki Scientists, 2014, amount 5000 €.
Finnish Cultural Foundation, Postdoc-Pooli Grant for year 2014, amount 33000 €.
Finnish Cultural Foundation, Center Grant for year 2012, amount 21000 €.
Helsinki University Fund, Young Scientist Grant for year 2010, amount 18300 €.

EXPERIENCE OF ORGANIZING SCIENTIFIC MEETINGS

5th China-Finland Science and Technology Forum "Winter sport and Health care", Chairman, 100 participates
1st Nordic POP-China Forum on Clinic and Translational Medicine, Chairman, 100 participates
10th European Forum, 09.2018, Chairman of Biomedical Panel, 300 participates
10th Chinese Life Science Annual Meeting, 09.2017, Vice Chairman, 100 participates

AWARDS

2019 Chinese Orthopaedic Association Outstanding Young Research, First Prize
2019 USERN Prize, top 5 nominated in Medical Sciences
2019 Oriental Scholar of Shanghai, China
2017 Distinguished Clinical Expert of Jiangsu Province, China
2014 Best Oral Drug Formulation, Control Release Society, USA

LEADERSHIP AND SUPERVISION EXPERIENCE

As main supervisor I have hosted:
6 visiting Professors (Ming Ma, Junnian Zhou, You Zhou, Ye Liang, Yong Guo, Sergej Filippov),
4 Postdocs (Jing Tu, Yuezhou Zhang, Xiaoyu Xu, Jixiang Wang), and

Supervised
1 PhD thesis (Zehua Liu)
13 master thesis (Bram Bogaert, Wali Inam, Dhayakumar Rajan Prakash, Korbinian Weisensee, Laura Leenesonne, Mariam Gouda, Md. Rifahul Abrar Taiseer, Oliver Koivisto, Tzu-Chen Rautio, Alexandra Manea, Jiaqi Yan, Xiaodong Ma, Dado Tokic).
I have been involved in **5 other PhD thesis** (Dongfei Liu, Barbara Herranz-Blanco, Xiangmeng Qu, Xiaoming Sun, Feng Kong).

Supervising:
At the moment, **as main supervisor, I am supervising 8 PhD students** (Chang Liu, Wali Inam, Dhayakumar Rajan Prakash, Wenhui Zhou, Jiaqi Yan, Xiaodong Ma, Yonghui Wang, Oliver Koivisto)
As co-supervisor, I am supervising another 6 PhD students (Ruoyu Cheng, Feng Zhang, Marco Mennillo, Diosangeles Soto Veliz, Rui Liu, Sepideh Parvanian).

MEMBERSHIPS AND POSITIONS OF TRUST IN SCIENTIFIC SOCIETIES

Editor board in Bioactive Materials (IF 8.7)
Editor board of Sensors
Editor of Mesoporous Biomaterials
Editor of Journal of Healthcare Engineering.
Honorable Chairman of the Chinese Association of Science and Technology in Finland, the association has more than 150 members and 80% has PhD degree or are PhD candidates.
Member of International Mayor Association (the association have 56 Mayors in Finland).

Reviewer of Chemical Review, Advanced Materials, Journal of Control Release, ACS Nano, Advanced Functional Materials, Small, Research, ACS Applied Materials and Interphases, Lab on a chip, Scientific Report, Chemical Science, Theranostics and so on.

LIST OF PUBLICATIONS

I have published more than 100 papers, with total impact factor of 1000, google citation of 3300 and H-index of 37.

Top 10 Publications:

Hongbo Zhang, Wenguo Cui, Xiangmeng Qu, Huayin Wu, Liangliang Qu, Xu Zhang, Ermei Mäkilä, Jarno Salonen, Yue-Qi Zhu*, Zhou Yang, Dong Chen, Hélder A. Santos, Mingtan Hai*, David A. Weitz*, "Photothermal Responsive Nanosized Hybrid Polymersome as Versatile Therapeutics Co-Delivery Nanovehicle for Effective Tumor Suppression", Proc. Natl. Acad. Sci. U.S.A. 2019, 116(16) 7744–7749.

Hongbo Zhang*, Dongfei Liu, Mohammad-Ali Shahbazi, Ermei Mäkilä, Bárbara Herranz-Blanco, Jarno Salonen, Jouni Hirvonen, Hélder A Santos*, Fabrication of a Multifunctional Nano-in-micro Drug Delivery Platform by Microfluidic Templated Encapsulation of Porous Silicon in Polymer Matrix, Adv. Mater., 26 (2014) 4497-4503. (First and Corresponding author)

Zehua Liu, Yunzhan Li, Wei Li*, Wenhua Lian, Marianna Kemell, Sami Hietala, Patrícia Figueiredo, Li Li, Ermei Mäkilä, Ming Ma, Jarno Salonen, Jouni T. Hirvonen, Dongfei Liu, **Hongbo Zhang***, Xianming Deng*, Hélder A. Santos*, "Close-loop Dynamic Nanohybrids on Collagen-Ark with In-situ Gelling Transformation Capability for Bio-mimetically Stage Specific Diabetic Wound Healing", Mater. Horiz. 2019, 6, 385–393. (Corresponding author)

Hongbo Zhang, Yueqi Zhu, Liangliang Qu, Huayin Wu, Haixin Kong, Zhou Yang, Dong Chen, Ermei Makila, Jarno J. Salonen, Hélder A. Santos, Mingtan Hai*, David A. Weitz*, "Gold Nanorods Conjugated Porous Silicon Nanoparticles Encapsulated in Calcium Alginate Nano Hydrogels Using Microemulsion Templates", Nano Lett. 2018, 18(2), 1448–1453.

Yuezhou Zhang, Jing Tu, Dongqing Wang, Haitao Zhu, Sajal Kumar Maity, Xiangmeng Qu, Bram Bogaert, Hao Pei, **Hongbo Zhang***. Programmable and Multifunctional DNA-Based Materials for Biomedical Applications. Advanced Materials, 2018 30(24), 1703658 (Corresponding author)

Zehua Liu, Yunzhan Li, Wei Li, Chen Xiao, Dongfei Liu, Chao Dong, Ming Zhang, Ermei Mäkilä, Marianna Kemell, Jarno Salonen, Jouni T. Hirvonen, **Hongbo Zhang***, Dawang Zhou*, Xianming Deng*, Hélder A. Santos*, "Multifunctional Nanohybrid Based on Porous Silicon Nanoparticles, Gold Nanoparticles and Acetalated Dextran for Liver Regeneration and Acute Liver Failure Theranostics", Adv. Mater. 2018, 30(24), 1703393. (Corresponding author)

Shengcai Qi, Pengfei Zhang, Ming Ma*, Minghua Yao, Jinjin Wu, Ermei Mäkilä, Jarno Salonen, Heikki Ruskoaho, Yuanzhi Xu, Hélder A. Santos*, **Hongbo Zhang***, "Cellular Internalization-Induced Aggregation of Porous Silicon Nanoparticles for Ultrasound Imaging and Protein-Mediated Protection of Stem Cells", Small 2019, 15(1), 1804332. (Corresponding author)

Tuying Yong, Xiaoqiong Zhang, Nana Bie, **Hongbo Zhang**, Xuting Zhang, Fuying Li, Abdul Hakeem, Jun Hu, Lu Gan*, Hélder A. Santos*, Xiangliang Yang*, "Tumor Exosome-Based Nanoparticles are Efficient Drug Carriers for Chemotherapy", Nature Commun. 2019, 10(1), 3838. (Co-first author)
Hongbo Zhang, Mohammad-Ali Shahbazi, Ermei M Mäkilä, Tiago H da Silva, Rui L Reis, Jarno J Salonen, Jouni T Hirvonen, Hélder A Santos, Diatom silica microparticles for sustained release and permeation enhancement following oral delivery of prednisone and mesalamine, Biomaterials, 34 (2013) 9210-9219.

Ruoyu Cheng, Lili Liu, Yi Xiang, Yong Lu, Lianfu Deng, **Hongbo Zhang***, Hélder A. Santos*, Wenguo Cui*, "Advanced Liposome-Loaded Scaffolds for Therapeutic and Tissue Engineering Applications", Biomaterials 2020, 232, 119706. (Corresponding author)

Full list of publications:

2020 (23)

[106] Xu Zhang*, **Hongbo Zhang**, Jianmei Gu, Jiayin Zhang, Hui Shi, Hui Qian, Dongqing Wang, Wenrong Xu, Jianming Pan*, Hélder A. Santos*, "Engineered Extracellular Vesicles for Cancer Therapy", Adv. Mater. 2020.(accepted) (Co-first author)
[105] Qiaolin Wei, Hamed Arami,, Hélder A. Santos, **Hongbo Zhang**, Yangyang Li,, Jian He, Danni Zhong, Daishun Ling, Min Zhou. "Intraoperative Assessment and Photothermal Ablation of the Tumor Margins Using Gold Nanoparticles", Adv. Sci. 2020. Accepted (Co-first author).
[104] Jie Shen, Ming Ma, **Hongbo Zhang**, Huizhu Yu, Fengfeng Xue, Nanjing Hao, Hangrong Chen. "Microfluidics-Assisted Surface Tri-Functionalization of Zeolitic Imidazolate Framework Nanocarrier for Targeted and Controllable Multitherapies of Tumor". ACS Appl. Mater. Interfaces. 2020, 12, 41, 45838–45849
[103] Ruoyu Cheng, Flavia Fontana, Junyuan Xiao, Zehua Liu, Patrícia Figueiredo, Mohammad-Ali Shahbazi, Shiqi Wang, Jing Jin, Giulia Torrieri, Jouni T. Hirvonen, **Hongbo Zhang**, Tongtong Chen, Wenguo Cui*, Yong Lu*, Hélder A. Santos*, "Recombination Monophosphoryl Lipid A Derived Vacosome for the Development of Preventive Cancer Vaccines", ACS Appl. Mater. Interfaces. 2020, 12, 40, 44554–44562
[102] Kun Zhang, Xiaoting Cheng, Liping Zhao, Mingqian Huang, Yong Tao, **Hongbo Zhang**, Jessica M Rosenholm, Min Zhuang, Zheng-Yi Chen, Bing Chen, Yilai Shu. "Direct Functional Protein Delivery with a Peptide into Neonatal and Adult Mammalian Inner Ear In Vivo", Molecular Therapy-Methods & Clinical Development, 2020, 18, 511-519.
[101] Ye Liang, Yonghua Wang, Liping Wang, Zhijuan Liang, Dan Li, Xiaoyu Xu, Yuanbin Chen, Xuecheng Yang*, Hongbo Zhang*, HaitaoNiu*. "Self-crosslinkable Chitosan-Hyaluronic Acid Dialdehyde Nanoparticles for CD44-targeted siRNA Delivery to Treat Bladder Cancer". Bioactive Materials, 2020, 6 (2), 433-446 (corresponding author).
[100] Minghua Yao, Xiaojing Shi, Changjing Zuo, Ming Ma,* Lu Zhang, **Hongbo Zhang**, Xin Li, Guo-Yuan Yang, Yaohui Tang,* Rong Wu.* "Engineering of SPECT/Photoacoustic Imaging/Antioxidative-Stress Triple-Function Nanoprobe for Advanced Mesenchymal Stem Cell Therapy of Cerebral Ischemia". ACS Appl. Mater. Interfaces 2020, 12 (34), 37885-37895.
[99] Guicai Li, Qi Han, Liling Zhang, Panjian Lu, Yuezhou Zhang, Shiyu Chen, Ping Zhang, Luzhong Zhang, Wenguo Cui, Hongkui Wang, **Hongbo Zhang***. "Construction of Dual-Biofunctionalized Chitosan/Collagen Scaffolds for Simultaneous Neovascularization and Nerve Regeneration". *Research* 2020, https://doi.org/10.34133/2020/2603048 (corresponding author).
[98] Jiaqi Yan, Chang Liu, Qiwei Wu, Junnian Zhou, Xiaoyu Xu, Lirong Zhang, Dongqing Wang, Fan Yang, **Hongbo Zhang***. "Mineralization of pH sensitive Doxorubicin Prodrug in ZIF-8 to Enable the Target Delivery to Solid Tumors" Analytical Chemistry, 2020, 92 (16), 11453-11461. (corresponding author).
[97] Amit Kumar Rajora,* Divyashree Ravishankar, **Hongbo Zhang**, Jessica M. Rosenholm. "Recent advances and impact of nanoformulations of chemo- and antiangiogenesis for combination cancer therapy". *Pharmaceutics* 2020, 12(6), 592;
[96] Emilia Palo, **Hongbo Zhang**, Mika Lastusaari, Mikko Oskari Salomäki. "Nanometer-Thick Ion-Selective Polyelectrolyte Multilayer Coatings to Inhibit the Disintegration of Inorganic Upconverting Nanoparticles" ACS Appl. Nano Mater. 2020, 3 (7), 6892-6898.

[95] Yang Ye, Jian He, Yue Qiao, Yuchen Qi, **Hongbo Zhang**, Hélder A. Santos, Danni Zhong, Wanlin Li, Shiyuan Hua, Wei Wang, Andrzej Grzybowski, Ke Yao*, Min Zhou*, "Mild Temperature Photothermal Assisted Anti-Bacterial and Anti-Inflammatory Nanosystem for Synergistic Treatment of Post-Cataract Surgery Endophthalmitis", Theranostics 2020, 10(19), 8541-8557.

[94] Chang Liu; Xiaoyu Xu; Junnian Zhou; Jiaqi Yan; Dongqing Wang; **Hongbo Zhang***. "Redox-responsive Tumor Targeted Dual-drug Loaded Biocompatible Metal-organic Frameworks Nanoparticles for Enhancing Anticancer Effects", BMC Mater. 2020 2 (1), 1-11. (corresponding author).

[93] Xiaoyu Xu; Oliver Koivisto; Chang Liu; Daqi Wang; Junnian Zhou; Mitro Miihkinen; Guillaume Jacquemet; Jessica Rosenholm*; Yilai Shu*; **Hongbo Zhang***. "Effective delivery of the CRISPR/Cas9 system enabled by functionalized mesoporous silica nanoparticles for GFP-tagged paxillin knock-in", Adv Ther, 2020, https://doi.org/10.1002/adtp.202000072

[92] Kawthar Mohamed, Eduardo Rodríguez-Román, Farzaneh Rahmani, Hongbo Zhang, Mariya Ivanovska, Sara A. Makka, Musa Joya, Rangarirai Makuku, Md Shahidul Islam, Nesrine Radwan, Laila Rahmah, Rayan Goda, Sunny O. Abarikwu, Mujtaba Shaw, Samaneh Zoghi, Sevan Irtsyan , Irene Ling, Orsolya Cseprekal, Attig-Bahar Faten, Esra Hazar Sayar, Chagajeg Soloukey, Giulia Grancini, Nima Rezaei. International Efforts to Save Healthcare Personnel during COVID-19. Acta Biomedica Atenei Parmensis, 2020, 3/20 (September) , COVID-19 UPDATE section.

[91] Yunzhan Li, Zehua Liu, Li Li, Wenhua Lian, Yaohui He, Elbadry Khalil, Ermei Mäkilä, Wenzhong Zhang, Giulia Torrieri, Xueyan Liu, Jingyi Su, Yuanming Xiu, Flavia Fontana, Jarno Salonen, Jouni Hirvonen, Wen Liu, Hongbo Zhang*, Hélder A. Santos*, Xianming Deng*, "Tandem-Mass-Tag Based Proteomic Analysis Facilitates Analyzing Critical Factors of Porous Silicon Nanoparticles in Determining Their Biological Responses Under Diseased Condition", Adv. Sci. 2020. 7 (15), 2001129

[90] Kawthar Mohamed, Eduardo Rodríguez-Román, Farzaneh Rahmani, Hongbo Zhang, Mariya Ivanovska, Sara A. Makka, Musa Joya, Rangarirai Makuku, Md Shahidul Islam, Nesrine Radwan, Laila Rahmah, Rayan Goda, Sunny O. Abarikwu, Mujtaba Shaw, Samaneh Zoghi, Sevan Irtsyan, Irene Ling, Orsolya Cseprekal, Attig-Bahar Faten, Esra Hazar, Chagajeg Soloukey Tbalvandany, Giulia Grancini, Nima Rezaei, "Borderless collaboration is needed for COVID-19; a disease that knows no borders", Infection Control & Hospital Epidemiology, 2020, 1-7

[89] Liucheng Zhang, Yi Xiang, **Hongbo Zhang**, Liying Cheng, Xiyuan Mao, Ning An, Lu Zhang, Jinxiong Zhou, Lianfu Deng, Yuguang Zhang*, Xiaoming Sun*, Hélder A. Santos*, Wenguo Cui*, "Biomimetic 3D-Self-Forming Approach For Microvascular Scaffolds", Adv. Sci. 2020, 7, 1903553 (Co-first author)

[88] Jiaqi Yan, Xiaoyu Xu, Junnian Zhou, Chang Liu, Lirong Zhang, Dongqing Wang, Fan Yang, **Hongbo Zhang***, " Fabrication of a pH/redox-triggered mesoporous silica-based nanoparticle with microfluidics for anti-cancer drugs doxorubicin and paclitaxel co-delivery", ACS Applied Bio Materials, 2020, 3, 2, 1216–1225 (corresponding author).

[87] Jian He, Yue Qiao, **Hongbo Zhang**, Jun Zhao,Wanli Li, Tingting Xie, Danni Zhong, Qiaolin Wei, Shiyuan Hua, Yinhui Yu, Ke Yao, Hélder A. Santos*, Min Zhou*, "Gold-Silver Nanoshells Promote Wound Healing from Drug-Resistant Bacteria Infection and Enable Monitoring via Surface-Enhanced Raman Scattering Imaging", Biomaterials 2020, 234, 119763. (Co-first author)

[86] Guohong Cao, Yangyang Li, Yucheng Qi, Yue Qiao, Jian He, **Hongbo Zhang***, Wenguo Cui*, Min Zhou*, "NIR-responsible and optically monitored nanoparticles release from electrospinning fibrous matrices", Mater. Today. Adv. 2020, 6, 100044
(Corresponding author).

[85] Ruoyu Cheng, Lili Liu, Yi Xiang, Yong Lu, Lianfu Deng, **Hongbo Zhang***, Hélder A. Santos*, Wenguo Cui*, "Advanced Liposome-Loaded Scaffolds for Therapeutic and Tissue Engineering Applications", Biomaterials 2020, 232, 119706. (Corresponding author)

[84] Yusen Qiao, Xingzhi Liu, Xichao Zhou, **Hongbo Zhang**, Wen Zhang, Wei Xiao, Guoqing Pan, Wenguo Cui*, Hélder A. Santos*, Qin Shi*, "Gelatin Templated Polypeptide Co-crosslinked Hydrogel for Bone Regeneration", Adv. Healthcare Mater. 2020, 9(1), 1901239. (Co-first author)

2019 (18)

[83] Guicai Li, Xueying Zhao, Luzhong Zhang, Jian Yang, Wenguo Cui, Yumin Yang, **Hongbo Zhang***. "Anisotropic ridge/groove microstructure for regulating morphology and biological function of Schwann cells", Applied Materials Today, 2019, 18, 100468 (Corresponding author)

[82] Yimin Wang, Di Wu, Guohua Wu, Jianguo Wu, Siming Lu, James Lo, Yong He, Chao Zhao, Xin Zhao, **Hongbo Zhang**, ShuQi Wang. "Metastasis-on-a-chip mimicking the progression of kidney cancer in the liver for predicting treatment efficacy". Theranostics 2019, 10 (1), 300
[81] Yangyang Li, Yuchen Qi, **Hongbo Zhang**, Zhiming Xia, Tingting Xie, Wanlin Li, Danni Zhong, Huanle Zhu, Min Zhou, "Gram-scale synthesis of highly biocompatible and intravenous injectable hafnium oxide nanocrystal with enhanced radiotherapy efficacy for cancer theranostics", Biomaterials, 2019, 119538 (Co-first author)
[80] Wei Chen, Hao Chen, Dandan Zheng, **Hongbo Zhang**, Lianfu Deng, Wenguo Cui, Yuhui Zhang*, Hélder A. Santos*, Hongxing Shen*, "Gene-Hydrogel Microenvironment Regulates Extracellular Matrix Metabolism Balance in Nucleus Pulposus", Adv. Sci. 2020, 7(1), 1902099.
[79] Jincheng Tang, Yong Gu, **Hongbo Zhang**, Liang Wu, Yun Xu, Jiannan Mao, Tianwen Xin, Tingjun Ye, Lianfu Deng, Wenguo Cui*, Hélder A. Santos*, Liang Chen*, "Outer-Inner Dual Reinforced Micro/Nano Hierarchical Scaffolds for Promoting Osteogenesis", Nanoscale 2019, 11, 15794–15803. (Co-first author)
[78] Tuying Yong, Xiaoqiong Zhang, Nana Bie, **Hongbo Zhang**, Xuting Zhang, Fuying Li, Abdul Hakeem, Jun Hu, Lu Gan*, Hélder A. Santos*, Xiangliang Yang*, "Tumor Exosome-Based Nanoparticles are Efficient Drug Carriers for Chemotherapy", Nature Commun. 2019, 10(1), 3838. (Co-first author)
[77] Diosangeles Soto Veliz*, **Hongbo Zhang**, Martti Toivakka. "Stacking up: a new approach for cell culture studies". Biomaterials Science, 2019. 7 (8), 3249-3257
[76] Ranjith Kumar Kankala, **Hongbo Zhang**, Chen-Guang Liu, Kiran Reddy Kanubaddi, Chia-Hung Lee, Shi-Bin Wang, Wenguo Cui*, Hélder A. Santos*, KaiLi Lin*, Ai-Zheng Chen*, "Metal Species-Encapsulated Mesoporous Silica Nanoparticles: Current Advancements and Latest Breakthroughs", Adv. Funct. Mater. 2019, 29(43), 1902652. (Review) (Co-first author)
[75] Yue Qiao, Yuan Ping, **Hongbo Zhang**, Fengyong Liu, Bo Zhou, Yinhui Yu, Tingting Xie, Wanli Li, Danni Zhong, Yuezhou Zhang, Ke Yao, Hélder A. Santos*, Min Zhou*, "Laser Activatable CuS Nanodots to Treat Multidrug-Resistant Bacteria and Release Copper Ion to Accelerate Wound Healing for Infected Chronic Nonhealing Wounds", ACS Appl. Mater. Interfaces 2019, 11(4), 3809–3822. (Co-first author)
[74] **Hongbo Zhang**, Wenguo Cui, Xiangmeng Qu, Huayin Wu, Liangliang Qu, Xu Zhang, Ermei Mäkilä, Jarno Salonen, Yue-Qi Zhu*, Zhou Yang, Dong Chen, Hélder A. Santos, Mingtan Hai*, David A. Weitz*, "Photothermal Responsive Nanosized Hybrid Polymersome as Versatile Therapeutics Co-Delivery Nanovehicle for Effective Tumor Suppression", Proc. Natl. Acad. Sci. U.S.A. 2019, 116(16) 7744–7749.
[73] Xiaodong Ma, Ezgi Ozliseli, Yuezhou Zhang, Guoqing Pan, Dongqing Wang, **Hongbo Zhang***. "Fabrication of Redox- Responsive Doxorubicin and Paclitaxel Prodrug Nanoparticles with Microfluidics for Selective Cancer Therapy". Biomaterials Science, 2019. 7 (2), 634-644 (Corresponding author)
[72] Yufei Yan, Hao Chen, **Hongbo Zhang**, Changjun Guo, Kai Yang, Kaizhe Chen, Ruoyu Cheng, Niandong Qian, Niklas Sandler, Yu Shrike Zhang, Haokai Shen, Jin Qi, Wenguo Cui, Lianfu Deng. Vascularized 3D printed scaffolds for promoting bone regeneration. Biomaterials, 2018, 190, 97-110 (Co-first author)
[71] Zehua Liu, Yunzhan Li, Wei Li*, Wenhua Lian, Marianna Kemell, Sami Hietala, Patrícia Figueiredo, Li Li, Ermei Mäkilä, Ming Ma, Jarno Salonen, Jouni T. Hirvonen, Dongfei Liu, **Hongbo Zhang***, Xianming Deng*, Hélder A. Santos*, "Close-loop Dynamic Nanohybrids on Collagen-Ark with In-situ Gelling Transformation Capability for Bio-mimetically Stage Specific Diabetic Wound Healing", Mater. Horiz. 2019, 6, 385–393. (Corresponding author)
[70] Yufei Yan, Tao Sun, **Hongbo Zhang**, Xiuling Ji, Yulong Sun, Xin Zhao, Lianfu Deng, Jin Qi*, Wenguo Cui*, Hélder A. Santos*, Hongyu Zhang*, "Euryale Ferox Seed-inspired Super-lubricated Nanoparticles for Treatment of Osteoarthritis", Adv. Funct. Mater. 2019, 29(4), 1807559. (Co-first author)
[69] Yuezhou Zhang, Dongfei Liu, **Hongbo Zhang***, Hélder A. Santos,* "Chapter 7: Microfluidic Mixing and Devices for Preparing Nanoparticulate Drug Delivery Systems". In: Microfluidics for pharmaceutical applications: from nano/micro systems fabrication to controlled drug delivery, Santos H. A., Liu D., and Zhang H. (Eds.), Elsevier B.V. 2019, 155–177. (Corresponding author)
[68] Shengcai Qi, Pengfei Zhang, Ming Ma*, Minghua Yao, Jinjin Wu, Ermei Mäkilä, Jarno Salonen, Heikki Ruskoaho, Yuanzhi Xu, Hélder A. Santos*, **Hongbo Zhang***, "Cellular Internalization-Induced Aggregation of Porous Silicon Nanoparticles for Ultrasound Imaging and Protein-Mediated Protection of Stem Cells", Small 2019, 15(1), 1804332. (Corresponding author)

[67] Xiyuan Mao, Ruoyu Cheng, **Hongbo Zhang**, Jinhong Bae, Liying Cheng, Lu Zhang, Lianfu Deng, Wenguo Cui*, Yuguang Zhang*, Hélder A. Santos*, Xiaoming Sun*, "Correction to "Self-Healing and Injectable Hydrogel for Matching Skin Flap Regeneration"", Adv. Sci. 2019, 6(13), 1901124. (Co-first author)
[66] Yueqi Zhu, **Hongbo Zhang**, Yiran Zhang, Huayin Wu, Liming Wei, Gen Zhou, Yuezhou Zhang, Lianfu Deng, Yingsheng Cheng*, Minghua Li*, Hélder A. Santos*, Wenguo Cui*, "Endovascular Metal Devices for the Treatment of Cerebrovascular Diseases", Adv. Mater. 2019, 31(8), 1805452. (Co-first author)

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[65] Xiaobin Guo, Yu Liu, Jiaxiang Bai, Binqing Yu, Menglei Xu, Houyi Sun, Jining Shen, Jiayi Lin, **Hongbo Zhang**, Dongqing Wang, Dechun Geng, Guoqing Pan, "Efficient Inhibition of Wear-Debris-Induced Osteolysis by Surface Biomimetic Engineering of Titanium Implant with a Mussel-Derived Integrin-Targeting Peptide", Advanced Biosystems, 2018, 3(2),1800253
[64] Minghua Yao, Ming Ma*, **Hongbo Zhang**, Gang Wan, Yuezhou Zhang, Hangrong Chen*, Rong Wu*, "Theranostic Role of Cobalt Protoporphyrin Nano-Formulation for Photoacoustic Imaging Guided Stem Cell Implantation". Adv. Funct. Mater. 2018. 28(47), 1804497
[63] Wei Li, Yunzhan Li, Zehua Liu, Nattha Kerdsakundee, Ming Zhang, Feng Zhang, Xueyan Liu, Tomás Bauleth-Ramos, Wenhua Lian, Ermei Mäkilä, Marianna Kemell, Yaping Ding, Bruno Sarmento, Ruedeekorn Wiwattanapatapee, Jarno Salonen, **Hongbo Zhang**, Jouni T. Hirvonen, Dongfei Liu*, Xianming Deng*, Hélder A. Santos*, "Hierarchical Structured and Programmed Vehicles Deliver Drugs Locally to Inflamed Sites of Intestine", Biomaterials 2018, 185, 322-332.
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