# Book Chapter

1. Basit Yameen，Jun Wu，Cristian Vilos，Andrew Whyte，David Werstler，Lori Pollit，Omid C. Farokhzad，Stimuli-responsive nanotheranostics，Nanotheranostics for personalized medicine, Prof. P. Couvreur and Prof. S. Mura, World Scientific, pp 267-296, 2016/4

# Peer Reviewed Publications

## 2016

47. Liu, Y; Gunda, V; Zhu, X; Xu, X; **Wu, J**; Askhatova, D; Farokhzad, O.C.; Parangi, S; Shi, J, Theranostic near-infrared fluorescent nanoplatform for imaging and systemic siRNA delivery to metastatic anaplastic thyroid cancer. *Proceedings of the National Academy of Sciences* 2016, (IN PROOF)

46. Li, Q; Wen, Y; You, X; Zhang, F; Shah, V; Chen, X; Tong, D; Yin, L; Wei, X; Li, J; **Wu, J\***; Xu, X\*; Development of reactive oxygen species (ROS)-responsive nanoplatform for targeted oral cancer therapy. *Journal of Materials Chemistry B* 2016, (DOI: 10.1039/C6TB01016D) （Corresponding author)

45. Zhao, H; Lin Z; Yildirimer, L; Dhinakar, A; Zhao, X\*; **Wu, J\***; Polymer-based nanoparticles for protein delivery: design, strategies and applications. *Journal of Materials Chemistry B* 2016, 4, 4060-4071 （Corresponding author)

44. Chen, F#; **Wu, J#**; Zheng, C; Zhu, J; Zhang, Y; You, X; Cai, F; Shah, V.; Liu, J. and Ge, L., TPGS modified reduced bovine serum albumin nanoparticles as a lipophilic anticancer drug carrier for overcoming multidrug resistance. *Journal of Materials Chemistry B* 2016, 4, 3959-3968 (Equal Contribution)

43. Nazila Kamaly, Gabrielle Fredman, Jhalique Jane R Fojas, Manikandan Subramanian, Won II Choi, Katherine Zepeda, Cristian Vilos, Mikyung Yu, Suresh Gadde, **Jun Wu**, Jaclyn Milton, Renata Carvalho Leitao, Livia Rosa Fernandes, Moaraj Hasan, Huayi Gao, Vance Nguyen, Jordan Harris, Ira Tabas, Omid C Farokhzad, Targeted Interleukin-10 Nanotherapeutics Developed with a Microfluidic Chip Enhance Resolution of Inflammation in Advanced Atherosclerosis. *ACS Nano* 2016, 10 (5), 5280–5292

42.Xu, X.# ; **Wu, J.#**; Liu, Y.; Yu, M.; Zhao, Z.; Zhu, X.; Bhasin, S.; Li, Q.; Ha, E.; Shi, J.; Farokhzad, O.C., Ultra pH-Responsive and Tumor-Penetrating Nanoplatform for Targeted siRNA Delivery with Robust Anti-Cancer Efficacy. *Angewandte Chemie International Edition* 2016, 55, 7091-7094 (Equal Contribution)

41. Zhu, X.#; **Wu, J.#**; Shan, W.; Zhou Z.; Liu, M.; Huang, Y., Sub-50 nm Nanoparticles with Biomimetic Surfaces to Sequentially Overcome the Mucosal Diffusion Barrier and the Epithelial Absorption Barrier. *Advanced Functional Materials* 2016, 26, 2728–2738 (Equal Contribution)

40. Zhu, X.#; **Wu, J.#**; Shan, W.; Tao, W.; Zhao, L.; Lim, L.; D'Ortenzio, M.; Karnik, R.; Huang, Y.; Shi, J.; Farokhzad, O.C., Polymeric Nanoparticles Amenable to Simultaneous Installation of Exterior Targeting and Interior Therapeutic Proteins. *Angewandte Chemie International Edition* 2016, 55 (10), 3309-3312. (Equal Contribution)

39. Kamaly, N.; Yameen, B.; **Wu, J.**; Farokhzad, O.C., Degradable Controlled-Release Polymers and Polymeric Nanoparticles: Mechanisms of Controlling Drug Release. *Chemical reviews* 2016, 116(4), 2602-2663.

38. Xu, X.; Cheng, Y.; **Wu, J.**; Cheng, H.; Cheng, S.; Zhuo, R.; Zhang, X., Smart and hyper-fast responsive polyprodrug nanoplatform for targeted cancer therapy. *Biomaterials* 2016, 76, 238-249.

37. Ling, X.; Huang, Z.; Wang, J.; Xie, J.; Feng, M.; Chen, Y.; Abbas, F.; Tu, J.\*; **Wu, J.\***; Sun, C.\*, Development of an itraconazole encapsulated polymeric nanoparticle platform for effective antifungal therapy. *Journal of Materials Chemistry B* 2016, 4 (10), 1787-1796. （Corresponding author)

36. Tao, W.; Zeng, X.; **Wu, J.**; Zhu, X.; Yu, X.; Zhang, X.; Zhang, J.; Liu, G.; Mei, L., Polydopamine-Based Surface Modification of Novel Nanoparticle-Aptamer Bioconjugates for In Vivo Breast Cancer Targeting and Enhanced Therapeutic Effects. *Theranostics* 2016, 6 (4), 470.

## 2015

35. Yu, M.; **Wu, J.**; Shi, J.; Farokhzad, O.C., Nanotechnology for protein delivery: Overview and perspectives. *Journal of Controlled Release* 2015. (DOI:10.1016/j.jconrel.2015.10.012)

34. Yu, Z.; Xu, Q.; Dong, C.; Lee, SS.; Gao, L.; Li, Y.; D'Ortenzio, M.; **Wu, J.\***, Self-Assembling Peptide Nanofibrous Hydrogel as a Versatile Drug Delivery Platform. *Current pharmaceutical design* 2015, 21 (29), 4342-4354.

33. **Wu, J.#**; Zhao, L.#; Xu, X.#; Bertrand, N.; Choi, W. I.; Yameen, B.; Shi, J.; Shah, V.; Mulvale, M.; Maclean, J.L.; Farokhzad, O.C., Hydrophobic Cysteine Poly (disulfide)‐based Redox‐Hypersensitive Nanoparticle Platform for Cancer Theranostics. *Angewandte Chemie International Edition* 2015, 54 (32), 9218-9223. (Equal Contribution)

32. Zhu, X.; Xu, Y.; Solis, L.M.; Tao, W.; Wang, L.; Behrens, C.; Xu, X.; Zhao, L.; Liu, D.; **Wu, J.**; Zhang, N.; et al. Long-circulating siRNA nanoparticles for validating Prohibitin1-targeted non-small cell lung cancer treatment. *Proceedings of the National Academy of Sciences* 2015, 112 (25), 7779-7784.

31. Wu, D.; **Wu, J.**; Qin, X.-H.; Chu, C.-C., From macro to micro to nano: development of a novel lysine based hydrogel platform and the enzyme triggered self-assembly of macro hydrogel into nanogel. *Journal of Materials Chemistry B* 2015, 3 (11), 2286-2294

## 2014

30. Zhu, X.; Radovic-Moreno, A. F.; **Wu, J.**; Langer, R.; Shi, J., Nanomedicine in the management of microbial infection–Overview and perspectives. *Nano today*, 2014, 9 (4), 478-498.

29. **Wu, J.#**; Zhao, X.#; Wu, D.; Chu, C.-C., Development of a biocompatible and biodegradable hybrid hydrogel platform for sustained release of ionic drugs. *Journal of Materials Chemistry B* 2014, 2 (38), 6660-6668. (Equal Contribution)

28. **Wu, J.**; Kamaly, N.; Shi, J.; Zhao, L.; Xiao, Z.; Hollett, G.; John, R.; Ray, S.; Xu, X.; Zhang, X., Development of multinuclear polymeric nanoparticles as robust protein nanocarriers. *Angewandte Chemie International Edition* 2014, 53 (34), 8975-8979.

27. Swami, A.; Reagan, M. R.; Basto, P.; Mishima, Y.; Kamaly, N.; Glavey, S.; Zhang, S.; Moschetta, M.; Seevaratnam, D.; Zhang, Y., Liu, J.; Memarzadeh, M.; **Wu, J.**; Manier, S., Engineered nanomedicine for myeloma and bone microenvironment targeting. *Proceedings of the National Academy of Sciences* 2014, 111 (28), 10287-10292.

26. Shi, J.; Xu, Y.; Xu, X.; Zhu, X.; Pridgen, E.; **Wu, J.**; Votruba, A. R.; Swami, A.; Zetter, B. R.; Farokhzad, O. C., Hybrid lipid–polymer nanoparticles for sustained siRNA delivery and gene silencing. *Nanomedicine: Nanotechnology, Biology and Medicine* 2014, 10 (5), e897-e900.

25. Pang, X.; **Wu, J.**; Chu, C.-C.; Chen, X., Development of an arginine-based cationic hydrogel platform: Synthesis, characterization and biomedical applications. *Acta biomaterialia* 2014, 10 (7), 3098-3107.

24. Lim, J.-M.; Swami, A.; Gilson, L. M.; Chopra, S.; Choi, S.; **Wu, J.**; Langer, R.; Karnik, R.; Farokhzad, O. C., Ultra-High Throughput Synthesis of Nanoparticles with Homogeneous Size Distribution Using a Coaxial Turbulent Jet Mixer. *ACS nano* 2014, 8 (6), 6056-6065.

23. Liang, J.; Zhou, Y.; **Wu, J.**; Ding, Y., Gold Nanoparticle-Based Drug Delivery Platform for Antineoplastic Chemotherapy. *Current drug metabolism* 2014, 15 (6), 620-631.

22. Choi, W. I.; Kamaly, N.; Riol-Blanco, L.; Lee, I.-H.; **Wu, J.**; Swami, A.; Vilos, C.; Yameen, B.; Yu, M.; Shi, J.; Tabas, I.; von Andrian, U. H.; Jon, S.; Farokhzad, O. C., A Solvent-Free Thermosponge Nanoparticle Platform for Efficient Delivery of Labile Proteins. *Nano Letters* 2014.

21. Bertrand, N.#; **Wu, J.#**; Xu, X.; Kamaly, N.; Farokhzad, O. C., Cancer nanotechnology: The impact of passive and active targeting in the era of modern cancer biology. *Advanced drug delivery reviews* 2014, 66, 2-25. (Equal Contribution)

## 2013

20. Xu, X.; Xie, K.; Zhang, X.-Q.; Pridgen, E. M.; Park, G. Y.; Cui, D. S.; Shi, J.; **Wu, J.**; Kantoff, P. W.; Lippard, S. J., Enhancing tumor cell response to chemotherapy through nanoparticle-mediated codelivery of siRNA and cisplatin prodrug. *Proceedings of the National Academy of Sciences* 2013, 110 (46), 18638-18643.

19. **Wu, J.**; Chu, C.-C., Water insoluble cationic poly (ester amide) s: synthesis, characterization and applications. *Journal of Materials Chemistry B* 2013, 1 (3), 353-360.

18. Wu, D.-Q.; **Wu, J.**; Chu, C.-C., A novel family of biodegradable hybrid hydrogels from arginine-based poly (ester amide) and hyaluronic acid precursors. *Soft Matter* 2013, 9 (15), 3965-3975.

## Before 2012

17. Xu, H.; **Wu, J.**; Chu, C.-C.; Shuler, M. L., Development of disposable PDMS micro cell culture analog devices with photopolymerizable hydrogel encapsulating living cells. *Biomedical microdevices* 2012, 14 (2), 409-418.

16. Xiao, Z.; Ji, C.; Shi, J.; Pridgen, E. M.; Frieder, J.; **Wu, J.**; Farokhzad, O. C., DNA Self‐Assembly of Targeted Near‐Infrared‐Responsive Gold Nanoparticles for Cancer Thermo‐Chemotherapy. *Angewandte Chemie* 2012, 124 (47), 12023-12027.

15. **Wu, J.**; Yamanouchi, D.; Liu, B.; Chu, C.-C., Biodegradable arginine-based poly (ether ester amide) s as a non-viral DNA delivery vector and their structure–function study. *Journal of Materials Chemistry* 2012, 22 (36), 18983-18991.

14. **Wu, J.**; Wu, D.; Mutschler, M. A.; Chu, C. C., Cationic Hybrid Hydrogels from Amino‐Acid‐Based Poly (ester amide): Fabrication, Characterization, and Biological Properties. *Advanced Functional Materials* 2012, 22 (18), 3815-3823.

13. **Wu, J.**; Chu, C.-C., Block copolymer of poly (ester amide) and polyesters: synthesis, characterization, and in vitro cellular response. *Acta biomaterialia* 2012, 8 (12), 4314-4323.

12. Hockaday, L.; Kang, K.; Colangelo, N.; Cheung, P.; Duan, B.; Malone, E.; **Wu, J.**; Girardi, L.; Bonassar, L.; Lipson, H., Rapid 3D printing of anatomically accurate and mechanically heterogeneous aortic valve hydrogel scaffolds. *Biofabrication* 2012, 4 (3), 035005.

11. **Wu, J.**; Mutschler, M. A.; Chu, C.-C., Synthesis and characterization of ionic charged water soluble arginine-based poly (ester amide). *Journal of Materials Science: Materials in Medicine* 2011, 22 (3), 469-479.

10. Deng, M.; **Wu, J.**; Reinhart-King, C. A.; Chu, C.-C., Biodegradable functional poly (ester amide) s with pendant hydroxyl functional groups: Synthesis, characterization, fabrication and in vitro cellular response. *Acta biomaterialia* 2011, 7 (4), 1504-1515.

9. Butcher, J. T.; Hockaday, L.; Kang, K.; Colangelo, N.; **Wu, J.**; Chu, C.-C. In High fidelity 3D tissue printing of scalable anatomically accurate living aortic valves, TISSUE ENGINEERING PART A, MARY ANN LIEBERT INC 140 HUGUENOT STREET, 3RD FL, NEW ROCHELLE, NY 10801 USA: 2011; pp 545-546.

8. Zhong, C.; **Wu, J.**; Reinhart-King, C.; Chu, C., Synthesis, characterization and cytotoxicity of photo-crosslinked maleic chitosan–polyethylene glycol diacrylate hybrid hydrogels. *Acta biomaterialia* 2010, 6 (10), 3908-3918.

7. Wu, H.; Fan, J.; Chu, C.-C.; **Wu, J.**, Electrospinning of small diameter 3-D nanofibrous tubular scaffolds with controllable nanofiber orientations for vascular grafts. *Journal of Materials Science: Materials in Medicine* 2010, 21 (12), 3207-3215.

6. Pang, X.; **Wu, J.**; Reinhart‐King, C.; Chu, C. C., Synthesis and characterization of functionalized water soluble cationic poly (ester amide) s. *Journal of Polymer Science Part A: Polymer Chemistry* 2010, 48 (17), 3758-3766.

5. Deng, M.; **Wu, J.**; Reinhart-King, C. A.; Chu, C.-C., Synthesis and characterization of biodegradable poly (ester amide) s with pendant amine functional groups and in vitro cellular response. *Biomacromolecules* 2009, 10 (11), 3037-3047.

4. Yamanouchi, D.; **Wu, J.**; Lazar, A. N.; Craig Kent, K.; Chu, C.-C.; Liu, B., Biodegradable arginine-based poly (ester-amide) s as non-viral gene delivery reagents. *Biomaterials* 2008, 29 (22), 3269-3277.

3. **Wu, J.**; Wang, X.; Keum, J. K.; Zhou, H.; Gelfer, M.; Avila‐Orta, C. A.; Pan, H.; Chen, W.; Chiao, S. M.; Hsiao, B. S., Water soluble complexes of chitosan‐g‐MPEG and hyaluronic acid. *Journal of Biomedical Materials Research Part A* 2007, 80 (4), 800-812.

2. Huang, N. F.; Patel, S.; Thakar, R. G.; **Wu, J.**; Hsiao, B. S.; Chu, B.; Lee, R. J.; Li, S., Myotube assembly on nanofibrous and micropatterned polymers. *Nano Letters* 2006, 6 (3), 537-542.

1. Zhu, A.; Zhang, M.; **Wu, J.**; Shen, J., Covalent immobilization of chitosan/heparin complex with a photosensitive hetero-bifunctional crosslinking reagent on PLA surface. *Biomaterials* 2002, 23 (23), 4657-4665.