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A. Education/Training

Nanjing University	BS	1987
Nanjing University	MS	1990
University of Pennsylvania	PhD	1996
Massachusetts Institute of Technology	Postdoctoral Fellow	96-97
Harvard University	Postdoctoral Fellow	97-00

B. Positions and Honors

Positions and Employment

2009.11-	Professor, Brandeis University.
2008.8-2009.10	Associate Professor, Brandeis University.
2008.7-2010.6	Professor, The Hong Kong University of Sci & Technol.
2006.1-2008.6	Associate Professor, The Hong Kong University of Sci & Technol.
2000.8-2005.12	Assistant Professor, The Hong Kong University of Sci & Technol.

Honors & Awards

2014	"Highly-cited researchers 2014" in chemistry, Thompson Reuters
2013	Kenneth Rainin Foundation Innovator Award
2008-2011	Human Frontier Science Program Award 2008
2008-2011	Visiting Professor, Sun Yat-sen University
2007	Distinguished Lectureship Award, CSJ Asian International Symposium, Chemical Society of Japan
2001	DuPont Asian & European Young Investigator Award
1997	NIH Postdoctoral Fellowship
1996	Glenn Brown Award of International Liquid Crystal Society
1990	Guanghua Award for graduate study (Nanjing University, China)

C. Publications, preprints, talks, and conference presentations

Peer-reviewed Publications

1. Li, J.; Kuang, Y.; Shi, J. F.; Zhou, J.; Medina, J. E.; Zhou, R.; Yuan, D.; Yang, C. H.; Wang, H. M.; Yang, Z. M.; Liu, J. F.; Dinulescu, D. M.* and Xu, B.* "Enzyme-Instructed Intracellular Molecular Self-assembly to Boost Activity of Cisplatin against Drug-Resistant Ovarian Cancer Cells" *Angew. Chem. Intl. Ed.*, **2015**, in press.

2. Shi, J. F.; Du, X. W.; Yuan, D.; Haburcak, R.; Zhou, N.; Xu, B.* "Supramolecular Detoxification of Neurotoxic Nanofibrils of Small Molecules via Morphological Switch" *Bioconjugate Chem*. **2015**, in press.

3. Yuan, D.; Shi, J. F.; Du, X. W.; Zhou, N.; Xu, B.* "Supramolecular Glycosylation Accelerates Proteolytic Degradation of Peptide Nanofibrils" *J. Am. Chem. Soc*., **2015**, 137, 10092-10095.

4. Zhou, J.; Du, X. W.; Li, J.; Yamagata, N.; Xu, B.* "Taurine Boosts Cellular Uptake of Small D-peptides for Enzyme-Instructed Intracellular Molecular Self-assembly", *J. Am. Chem. Soc.* **2015**, 137, 10040-10043.

5. Zhou, J.; Xu, B.* "Enzyme-Instructed Self-Assembly (EISA): A Multi-Step Process for Potential Cancer Therapy" *Bioconjugate Chem*., **2015**, *26*, 987-999.

6. Yuan, D.; Du, X. W.; Shi, J. F.; Zhou, N.; Zhou, J.; Xu, B.* "Mixing Biomimetic Heterodimers of Nucleopeptides to Generate Biocompatible and Biostable Supramolecular Hydrogels" *Angew. Chem. Intl. Ed*., **2015**, 54, 5705-5708.

7. Zhou, J.; Du, X. W.; Xu, B.* "Prion-like nanofibrils of small molecules (PriSM): a new frontier at the intersection of supramolecular chemistry and cell biology", *Prion*, **2015**, 9, 110-118.

8. Shi, J. F.; Du, X. W.; Yuan, D.; Haburcak, R.; Wu, D. D.; Zhou, N.; Xu, B.* "Enzyme transformation to modulate the ligand-receptor interactions between small molecules" *Chem. Commun*. **2015**, *51*, 4899-4901.

9. Zhang, Y.; Zhou, N.; Shi, J. F.; Pochapsky, S. S.; Pochapsky, S. S.; Zhang, B.; Zhang, X. X.; Xu, B.* "Unfolding a molecular trefoil derived from a zwitterionic metallopeptide to form self-assembled nanostructures" *Nat. Commun*. **2015**, *6*, 6165.

10. Yuan, D.; Du, X. W.; Shi, J. F.; Ning Zhou, N.; Baoum, A. A. Footy, K. O. A.; Badahdah, K. O.; Xu, B.* "Synthesis and evaluation of the biostability and cell compatibility of novel conjugates of nucleobase, peptidic epitope, and saccharid" *Beilstein J. Org. Chem*. **2015**, *11*, 1352-1359.

11. Du, X. W.; Zhou, J.; Xu, B. "Ectoenzyme Switches the Surface of Magnetic Nanoparticles for Selective Binding of Cancer Cells" *J. Colloid. Interface Sci*., **2015**, 447, 273-7.

12. Wu, D. D.; Du, X. W.; Shi, J. F.; Zhou, J.; Zhou, N.; Xu, B.* "The First CD73-Instructed Supramolecular Hydrogel" *J. Colloid. Interface Sci*., **2015**, 447, 269-72.

13. Shi, J. F.; Du, X. W.; Huang, Y. B.; Zhou, J.; Yuan, D.; Wu, D. D.; Zhang, Y.; Haburcak, R.; Epstein, I. R.*; Xu, B.* "Ligand-Receptor Interaction Catalyzes the Aggregation of Small Molecules to Induce Cell Necroptosis" *J. Am. Chem. Soc*. **2015**, *137*, 26-29.

14. Du, X. W.; Zhou, J.; Wu, L. H.; Sun, S. H.; Xu, B.*, "Enzymatic Transformation of Phosphate Decorated Magnetic Nanoparticles for Selectively Sorting and Inhibiting Cancer Cells" *Bioconjugate Chem.*, **2014**, *25*, 2129–2133.

15. Zhao, F.; Li, J.; Zhou, N.; Sakai, J.; Gao, Y.; Shi, J. F.; Goldman, B.; Browdy, H. M.; Luo, H. R.; Xu, B.* "De Novo Chemoattractants Form Supramolecular Hydrogels for Immunomodulating Neutrophils In Vivo", *Bioconjugate Chem.*, **2014**, 25, 2116-2122.

16. Yuan, D.; Du, X. W.; Shi, J. F.; Ning Zhou, N.; Baoum, A. A.; Xu, B.* "Synthesis of novel conjugates of saccharide, amino acids, nucleobase and the evaluation of their cell compatibility" *Beilstein J. Org. Chem*. **2014**, 10, 2406-2413.

17. Shi, J. F.; Du, X. W.; Yuan, D.; Zhou, J.; Zhou, N.; Huang, Y. B.; Xu, B.* "D-Amino acids Modulate the Cellular Response of Enzymatic-Instructed Supramolecular Nanofibers of Small Peptides" *Biomacromolecules*, **2014**, *15*, 3559.

18. Kuang,Y.; Long, M. J. C.; Zhou, J.; Shi, J. F.; Gao, Y.; Xu, C.; Hedstrom, L.; Xu, B.* "Prion-like Nanofibrils of Small Molecules (PriSM) Selectively Inhibit Cancer Cells by Impeding Cytoskeleton Dynamics" *J. Biol. Chem*. **2014**, *289*, 29208.

19. Zhao, F.; Heesters, B. A.; Chiu, I.; Gao, Y.; Shi, J. F.; Zhou, N.; Carroll, M. C.; Xu, B.* "L-Rhamnose-containing supramolecular nanofibrils as a potential immunosuppressive material" *Org. Biomol. Chem*., **2014**, *12*, 6816-6819.

20. Yuan, D.; Zhou*, R.;* Shi, J. F.; Du, X. W.; Li, X. M.; Xu, B.* "Enzyme-instructed self-assembly of the hydrogelators consisting of nucleobase, amino acids, and saccharide" *RSC Advances*, **2014**, *4*, 26487-26490.

21. Du, X. W.; Zhou, J.; Guvench, O.; Sangiorgi, F. O.; Li, X. M.; Zhou, N.; Xu, B.* "Supramolecular Assemblies of A Conjugate of Nucleobase, Amino Acids, and Saccharide Act as Agonists for Proliferation of Embryonic Stem Cells and Development of Zygotes" *Bioconjugate Chem.*, **2014**, *25*, 1031-1035.

22. Zhang, Y.; Zhou, N.; Li, N.; Sun, M.; Kim, D.; Fraden, S. *; Epstein, I. E. *; Xu, B.* "Giant Volume Change of Active Gels under Continuous Flow" *J. Am. Chem. Soc*., **2014**, *136*, 7341-7346.

23. Wu, D. D.*; Du, X. W.; Shi. J. F.; Zhou, J.; Xu, B.* "Supramolecular Nanofibers/Hydrogels of the Conjugates of Nu-cleobase, Saccharide, and Amino Acids" *Chinese J. Chem*., **2014**, 32, 313-318.

24. Zhou, R.; Xu, B.* "Insight of the Cytotoxicity of the Aggregates of Peptides or Aberrant Proteins: A Meta-Analysis" *PLoS One*, **2014**, 9, e95759.

25. Kuang, Y.; Shi, J. F.; Li, J.; Yuan, D.; Alberti, K. A.; Xu, Q. B.; Xu, B.* "Pericellular Hydrogel/Nanonets Inhibit Cancer Cells" *Angew. Chem. Intl. Ed.*, **2014**, *53*, 8104-8107.

26. Kuang, Y.; Du, X. W.; Zhou, J.; Xu, B.* "Supramolecular nanofibrils inhibit cancer progression in vitro and in vivo" *Adv. Healthcare Mater*. **2014**, *3*, 1217-1221.

27. Du, X. W.; Zhou, J.; Xu, B.* "Supramolecular Hydrogels Made of the Basic Biological Building Blocks" *Chem. Asian J.*, **2014**, 9, 1446-1472.

28. Zhou, J.; Du, X. W.; Gao, Y.; Shi, J. F.; Xu, B.* "Aromatic-Aromatic Interactions Enhance Interfiber Contacts for Enzymatic Formation of A Spontaneously Aligned Supramolecular Hydrogel" *J. Am. Chem. Soc*., **2014**, *136*, 2970-2973.

29. Kuang, Y.; Gao, Y.; Shi, J. F.; Li, J; Xu, B.* "The first supramolecular peptidic hydrogelator containing taurine" *Chem. Commun*, **2014**, *50*, 2772-2774.

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33. Zhang, Y.; Zhou, N.; Akella, S.; Kuang, Y.; Kim, D.; Schwartz, A.; Bezpalko, M.; Foxman, B. M.; Fraden, S.; Epstein, I. R.*;Xu, B.* "Active Cross-linkers that Lead to Active Gels" *Angew. Chem. Int. Ed*. **2013**, *52*, 11494-11498.

34. Li, J. Y.; Gao, Y.; Kuang, Y.; Shi, J. F.; Du, X. W.; Zhou, J.; Wang, H. M.; Yang, Z. M.; Xu, B. "Dephosphorylation of D-Peptide Derivatives to Form Biofunctional, Supramolecular Nanofibers/Hydrogels and Their Potential Applications for Intracellular Imaging and Intratumoral Chemotherapy" *J. Am. Chem. Soc.*, **2013**, *135*, 9907-9914.

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37. Li, J. Y.; Li, X. M.; Kuang, Y.; Gao, Y.; Du, X. W.; Shi, J. F.; Xu B. "Self-delivery Multifunctional Anti-HIV Hydrogels for Sustained Release" *Adv. Healthcare Mater.*, **2013**, *2*, 1586-1590.

38. Huang, Y. B.; Shi, J. F.; Yuan, D.; Zhou, N.; Xu, B. "Length-Dependent Proteolytic Cleavage of Short Oligopeptides Catalyzed by Matrix Metalloprotease-9" *Biopolymers: Peptide Sci.*, **2013**, *6*, 790-795.

39. Li, J. Y.; Kuang, Y.; Shi, J. F.; Gao, Y.; Zhou, J.; Xu, B. "The Conjugation of Non-steroidal Anti-inflammatory Drugs (NSAID) to Small Peptides for Generating Multifunctional Supramolecular Nanofibers/Hydrogels" *Beilstein J. Org. Chem.*, **2013**, *9*, 908-917.

40. Kuang, Y.; Yuan, D.; Zhang, Y.; Kao, A.; Du, X. W.; Xu, B. "Interactions between cellular proteins and morphologically different nanoscale aggregates of small molecules" *RSC Advances*, **2013**, *3*, 7704-7707.

41. Zhang, Y.; Zhang, B.; Kuang, Y.; Gao, Y.; Shi, J.; Zhang, X. X.; Xu, B. "A Redox Responsive, Fluorescent Supramolecular Metallohydrogel Consists of Nanofibers with Single-Molecule Width" *J. Am. Chem. Soc.*, **2013**, *135*, 5008-5011

42. Li, J. Y.; Kuang, Y.; Gao, Y.; Du, X. W.; Shi, J. F.; Xu, B. "D-Amino Acids Boost the Selectivity and Confer Supramolecular Hydrogels of a Non-steroidal Anti-inflammatory Drug (NSAID)" *J. Am. Chem. Soc.*, **2013**, *135,* 542-545.

43. Li, X. M.; Du, X. W.; Li, J. Y; Gao, Y.; Pan, Y.; Zhou, N.; Xu, B. "Introducing D-Amino Acid or Simple Glycoside into Small Peptides to Enable Supramolecular Hydrogelators to Resist Proteolysis" *Langmuir*, **2012**, *37*, 13512-13517.

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catalyst to the polymer backbone to tailor chemomechanical oscillation" *Soft Matter*, **2012**, *8*, 7056-7061.

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52. Zhang, Y.; Li, N.; Delgado, J.; Gao, Y.; Kuang, Y.; Fraden, S.; Epstein, I. R.;* Xu, B* "Post-Self-Assembly Crosslinking of Molecular Nanofibers for Oscillatory Hydrogels" *Langmuir*, **2012**, *28*, 3063-3066.

53. Li, X. M.; Kuang, Y.; Xu, B. "Molecular trinity" for soft nanomaterials: Integrating nucleobases, amino acids, and glycosides to construct multifunctional hydrogelators" *Soft Matter*, **2012**, *10*, 2801-2806.

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55. Kuang, Y.; Gao, Y.; Xu, B. "Supramolecular hydrogelators of N-terminated dipeptides selectively inhibit cancer cells" *Chem. Commun*., **2011**, *47*, 12625-12627.

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62. Pan, Y.; Long, M. J. C.; Li, X. M.; Shi, J. F.; Hedstrom, L.; Xu, B. "Glutathione (GSH)-Decorated Magnetic Nanoparticles for Binding Glutathione-S-transferase (GST) Fusion Protein and Manipulating Live Cells" *Chem. Sci.*, **2011**, *2*, 945-948.

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Invited Talks at National and International Meetings

1. "Enzymatic transformation and self-assembly of peptides for future cancer therapy" Pacific Chem 2015, Honolulu, USA, Dec. **2015**
2. "Enzyme-instructed self-assembly in nanoscale for future cancer therapy" 4th Nanotoday Conference, Dubai, Dec. **2015**
3. "Nanoscale molecular assemblies in cellular environment: From molecules to processes" POLARIS Conference, Guimarães, Portugal, Jun. **2015**
4. "Enzymatic transformation and self-assembly of peptides for future cancer therapy" ACS Spring meeting, Denver, USA, Mar. **2015**
5. "Small Molecule Self-Assembly for Controlling the Fate of Cells" 3rd International Supramolecular System Symposium (SSS2014), Changchun, China, Aug. **2014**
6. "Enzyme-Instructed Supramolecular Polymers for Controlling the Fate of Cells" ACS Fall meeting, San Francisco, USA, Aug. **2014**
7. "Enzyme-Instructed Formation of Molecular Nanofibers for Mucosal Lining Restoration and Anti-inflammatory Drug Delivery" 2014 Innovations Symposium, Kenneth Rainin Foundation, San Francisco, USA, July **2014**

8. “Molecular aggregates in cellular environment “4th International Colloids Conference, Madrid, Spain, Jun. **2014**
9. “Biomimetic of Cells: From Self-oscillation to Self-organization” at the 14th International Symposium on Biomimetic Materials Processing, Takayama, Japan, Jan. **2014**
10. “Self-assembly of Small Molecules in Cellular Environment” ACS Spring meeting, New Orleans, Apr. **2013**
11. “Formation of Active Soft Matter Via Molecular Self-Assembly“Materials Research Society Spring Meeting, San Francisco, USA, Apr. **2013**
12. “Biological Functions and Applications of Supramolecular Self-Assembly in Cellular Environment “at the 13th International Symposium on Biomimetic Materials Processing, Takayama, Japan, Jan. **2013**
13. “Biological Functions of Aggregates of Small Molecules” International Symposium on Biofunctional Chemistry (ISBC2012) Tokyo, Japan, Nov. **2012**.
14. “Functional Mimic of Biomacromolecules by Self-assembly of the Conjugates of Nucleobase, Amino Acid, and Glycosides” Materials Research Society Fall Meeting, Boston, USA, Nov. **2012**
15. “Small Peptides for Soft Nanomaterials” Nanopeptide 2012 conference, Manchester, UK, Nov. **2012**
16. “Formation, Functions, and Applications of Aggregates of Small Peptide Derivatives” Sixth Peptide Engineering Meeting, Atlanta, USA, Oct. **2012**.
17. “Integrating Enzymatic Reactions and Molecular Self-Assembly for Approaches and Applications of Supramolecular Hydrogels” International Union of Materials Research Socities (IUMRS)-International Conference on Electronic Materials 2012, Yokohama, Japan, Sept. **2012**
18. “Magnetic Nanoparticles for Direct Protein Sorting inside Live Cells “Materials Research Society Spring Meeting, San Francisco, USA, Apr. **2012**
19. “Supramolecular Hydrogelators for Soft Nanomaterials “at the 12th International Symposium on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2012**
20. “Enzyme-instructed formation of molecular nanofibers/hydrogel for Biomedicine” Materials Research Society Fall Meeting, Boston, USA, Nov. **2011**
21. “Formation of Nanofibers of Small Molecules inside Cells” at the Molecular Materials Meeting (M3), Singapore, Jan. **2011**
22. “Formation of Nanofibers and Hydrogels of Small Molecules inside Cells” at Indo-US Meeting/Workshop on Self-Assembled Fibrillar Gels, Trivandrum, India, Jan. **2011**
23. “Exploring Synthetic Biofunctional Nanostructure inside Cells” at the 11th International Symposium on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2011**
24. “Progress and challenges of biological applications of multifunctional nanoparticles” Challenges in Inorganic and Materials Chemistry-the International Symposia on Advancing the Chemical Sciences (ISACS-3), Hong Kong, Jul. **2010**
25. “Synthesis and Applications of Multifunctional Magnetic Nanoparticles” Materials Research Society Spring Meeting, San Francisco, USA, Apr. **2010**
26. “Enzyme-instructed Molecular Self-assembly to Form Nanofibers and Hydrogels for Biomedical Applications” at the 10th International Symposium on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2010**

27. “Enzymatic hydrogelation of small molecules and applications in biomedicine” Polymeric and self-assembly hydrogels, Manchester, UK, Sept, **2009.**
28. “Multifunctional Magnetic Nanoparticles: Design, Synthesis, and Biomedical Applications” ACS fall meeting, Washington D. C., August **2009**
29. “Enzyme-Instructed Formation of Nanofibers and Hydrogels for Biomedicine “ 42nd IUPAC Congress, August **2009**
30. “Multifunctional Magnetic Nanoparticles: Design, Synthesis, and Biomedical Applications” The 1ST Nano Today Conference, Singapore, August **2009**
31. “Enzymatic formation of nanofibers and hydrogels for biomedicine” 4th Sino-US Nano Meeting, China, July **2009**
32. “Self-assembled hybrid nanofibers confer a supramolecular magnetorheological material” Materials Research Society Spring Meeting, San Francisco, USA, Apr. **2009**
33. “Bioinspired Multiphase Materials: Supramolecular Hydrogels to Mimic Enzyme and Bioluminescence” 237th ACS National Meeting, Utah, Mar, **2009**.
34. “Multifunctional Magnetic Nanoparticles” 7th Global COE special lecture, Kyushu University, 18 Dec, **2008**.
35. “Enzyme Triggers Self-assembly and Hydrogelation for Controlling the Fate of Cells” International Symposium on Molecular and System Life Sciences,10-11 Dec **2008**, RIKEN Center for Developmental Biology, Kobe, Japan
36. “Constructing Novel Nanostructures for Anticancer Therapy” 236th ACS National Meeting, Philadelphia, Aug, **2008**.
37. “Design and Applications of Bionanomaterials” at the 8th International Symposium on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2008**
38. “Development of Supramolecular Hydrogel as Novel Biomaterials” at the UK-Hong Kong Frontiers of Science Symposium, Hong Kong, Jan. **2008**
39. “Enzymatic Formation of Self-Assembled Nanofibers and Their Biological Applications as Supramolecular Hydrogels” Xiangshan Conference, Beijing, Oct. **2007**.
40. “Synthesis and Applications of Biofunctional Nanostructures” Materials Today Asia, Beijing, Sept. **2007**
41. “Synthesis and Applications of Multifunctional Nanoparticles”, Advanced Materials Workshop III, Dalian, June, **2007**
42. “Enzymatic Formation of Self-Assembled Nanofibers for Making Biomaterials” 2nd Molecular Biomimetics and Bionanotechnology Workshop, Istanbul, Turkey, May, **2007**.
43. “Enzymatic Supramolecular Hydrogelation for Making Biomaterials”, Materials Research Society Spring Meeting, San Francisco, USA, Apr. **2007**
44. “Enzymatic Supramolecular Hydrogelation for Making Nanobiomaterials” (keynote lecture) at 87th Annual Meeting of The Chemical Society of Japan, Osaka, Japan, Mar. **2007**
45. “Supramolecular Hydrogels as Novel Biomaterials: Design, Synthesis, and Applications” at the 7th International Symposium on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2007**
46. “Magnetic Nanoparticle Complexes for Pathogen Detection and Toxin Removal” at the International Symposium on Flow Dynamics, Sendai, Japan, 8th, Nov. **2006**
47. “Biofunctional Nanoparticles and Nanofibers: Synthesis And Applications”, Forum on Nanoscience and Biomedicine, Beijing, China, 11th Oct. **2006**

48. “Enzymatic Approaches to Form Supramolecular Nanofibers for Hydrogels” at the 6th International Symposium on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2006**
49. “Biofunctional Magnetic Nanoparticles: Synthesis And Applications” at the 11th Asian Chemical Congress, Seoul, Korea, Aug. **2005**
50. “Explore ligand-receptor interactions in supramolecular hydrogels” at International Polymer Conference 2005, Fukoka, Japan, Jul. **2005**
51. “Biofunctional Nanoparticles And Nanofibers: Synthesis And Applications” at the 5th International Conference on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2005**
52. “Biomimetic Supramolecular Hydrogels and Their Applications” at the 4th International Conference on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2004**
53. “Solventless Polymerization at the Gas/Solid Interface to Form Polymeric Thin Films and Its Applications” at Materials Research Society Spring Meeting, San Francisco, USA, Apr. **2003**.
54. “Polyvalency/Multivalency—Biomimetic Approach to Inhibit and Detect Bacteria” at the 3rd International Conference on Biomimetic Materials Processing, Nagoya, Japan, Jan. **2003**
55. “Solventless Polymerization at the Gas/Solid Interface to Form Polymeric Thin Films” at the 2nd International Conference on Biomimetic Materials Processing, Nagoya, Japan, Feb. **2002**
56. “Design and Synthesis of Novel Bowlic Liquid Crystals” at the 16th International Conference on Liquid Crystals, Kent, USA, Jul. **1996**

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1. Swager, T. M.; Xu, B. “Calixarene-Based Transition Metal Complexes and Photonic Devices Comprising the Same” US 5,453,220.
2. Anquetil, P. A.; Hunter, I. W.; Madden, J. D.; Madden, P. G.; Pullen, A. E.; Swager, T. M.; Xu, B.; Yu, H. “Molecular Acuators, and Methods of Use Thereof” WO 2003101955; US7,138,075; US 7,658,868
3. Xu, B.; Ho, P. L.; Gu, H. W. “Biofunctional Magnetic Nanoparticles For Pathogen Detection” U.S. 7,754,444.
4. Xu, B.; Gao, P.; Yang C. “Methods of fabric treatment.” U.S. 8,038,728.
5. Yang, C.; Yuen, M. M. F.; Xu, B “Percolation efficiency of the conductivity of electrically conductive adhesives” US8,231,808
6. Xu, B.; Yang, Z. M.; Xu, K. M. “Method for creating intracellular artificial nanostructures in situ” U.S. 8,338,151.
7. Xu, B.; Yang, Z. M.; Xu, K. M. “Multifunctional supramolecular hydrogels as biomaterials” U.S. Patent (pending).
8. Xu, B.; Li, X. M. “Supramolecular nanofibers and hydrogels based on oligopeptides functionalized with nucleobases” US Patent Application No: 61/491,547 (filed 05/31/2011). iEdision No.: 0925301-11-0002.
9. Xu, B.; Li, X. M. “Supramolecular nanofibers and hydrogels based on amino acid-nucleobase-glycoside conjugates” US Patent Application No: 61/491,544 (filed 05/31/2011). iEdision No.: 0925301-11-0001.
10. Xu, B.; Li, J. Y.; Kuang, Y. “Hydrogelators comprising D-amino acids and NSAID”. US Patent Application No: 61/724, 026 (filed 11/8/2012). iEdision No.: 0925301-12-0003.
11. Xu, B; Kuang, Y. “Inhibition of tumor growth with aggregates of small molecules” US Patent Application No: 61/724, 026 (filed 03/6/2013). iEdision No.: 0925301-13-0001.
12. Xu, B.; Zhao, F.; Luo, H. B. “Supramolecular hydrogel of fMLF-based molecule gives a prolonged inflammation response in vivo” US Patent Application No: 61/935,190 (Filed 02/03/2014). iEdision No.: 0925301-13-0002.

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