

**NSF BIOGRAPHICAL SKETCH**

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**IDENTIFYING INFORMATION:**

NAME: Chen, Bo

POSITION TITLE: Associate Professor

ORGANIZATION AND LOCATION: University of Central Florida, Orlando, FL, United States

**Professional Preparation:**

ORGANIZATION AND LOCATION	DEGREE (if applicable)	DATE RECEIVED	FIELD OF STUDY
NIDDK, NIH, Bethesda, MD	N/A	07/2011	Solid state NMR
Northwestern University, Evanston, IL, USA	PHD	06/2007	Physics
Peking University, Beijing, Beijing, China	BS	06/2001	Nuclear Physics

**Appointments and Positions**

2017 - present Associate Professor, University of Central Florida, Orlando, FL, United States

2011 - 2017 Assistant Professor, University of Central Florida, Orlando, FL, United States 2008

- 2011 Research Fellow, NIDDK, NIH, Bethesda, MD, United States

2007 - 2008 Visiting Fellow, NIDDK, NIH, Bethesda, MD, United States

**Products****Products Most Closely Related to the Proposed Project**

1. Serrano A, Qiao X, Matos JO, Farley L, Cilenti L, Chen B, Tatulian SA, Teter K. Reversal of Alpha-Synuclein Fibrillization by Protein Disulfide Isomerase. *Front Cell Dev Biol.* 2020;8:726. PubMed Central PMCID: [PMC7406567](https://pubmed.ncbi.nlm.nih.gov/3406567/).
2. Xu C, Kandel N, Qiao X, Khan MI, Pratakshya P, Tolouei NE, Chen B, Gorodetsky AA. Long-Range Proton Transport in Films from a Reflectin-Derived Polypeptide. *ACS Appl Mater Interfaces.* 2021 May 12;13(18):20938-20946. PubMed PMID: [33938723](https://pubmed.ncbi.nlm.nih.gov/33938723/).
3. Chen B. 1 ed. *Fundamentals of Recoupling and Decoupling Techniques in Solid State NMR* [Internet] Melville, New York: AIP Publishing; 2020. Available from: [https://doi.org/10.1063/9780735422209\\_frontmatter](https://doi.org/10.1063/9780735422209_frontmatter)
4. Thames T, Bryer AJ, Qiao X, Jeon J, Weed R, Janicki K, Hu B, Gor'kov PL, Hung I, Gan Z, Perilla JR, Chen B. Curvature of the Retroviral Capsid Assembly Is Modulated by a Molecular Switch. *J Phys Chem Lett.* 2021 Aug 19;12(32):7768-7776. PubMed Central PMCID: [PMC9083439](https://pubmed.ncbi.nlm.nih.gov/39083439/).
5. Chen B. ARTIST: an automatic residue type assignment program for multidimensional NMR spectra. Under review, *Journal of Biomolecular NMR*, available at <https://doi.org/10.21203/rs.3.rs-2748908/v1>. 2023. Available from:

<https://doi.org/10.21203/rs.3.rs-2748908/v1>

**Other Significant Products, Whether or Not Related to the Proposed Project**

1. Zhao G, Perilla JR, Yufenyuy EL, Meng X, Chen B, Ning J, Ahn J, Gronenborn AM, Schulten K, Aiken C, Zhang P. Mature HIV-1 capsid structure by cryo-electron microscopy and all-atom molecular dynamics. *Nature*. 2013 May 30;497(7451):643-6. PubMed Central PMCID: [PMC3729984](#).
2. Chen B. HIV Capsid Assembly, Mechanism, and Structure. *Biochemistry*. 2016 May 10;55(18):2539-52. PubMed PMID: [27074418](#).
3. Jeon J, Qiao X, Hung I, Mitra AK, Desfosses A, Huang D, Gor'kov PL, Craven RC, Kingston RL, Gan Z, Zhu F, Chen B. Structural Model of the Tubular Assembly of the Rous Sarcoma Virus Capsid Protein. *J Am Chem Soc*. 2017 Feb 8;139(5):2006-2013. PubMed PMID: [28094514](#).
4. Qiao X, Jeon J, Cole AL, Matos JO, Bautista S, Castillo J, Hung I, Gan Z, Tatulian SA, Cole AM, Chen B. Morphology-Dependent HIV-Enhancing Effect of Semen-Derived Enhancer of Viral Infection. *Biophys J*. 2015 Apr 21;108(8):2028-37. PubMed Central PMCID: [PMC4407262](#).
5. Qiao X, Jeon J, Weber J, Zhu F, Chen B. Mechanism of polymorphism and curvature of HIV capsid assemblies probed by 3D simulations with a novel coarse grain model. *Biochim Biophys Acta*. 2015 Nov;1850(11):2353-67. PubMed PMID: [26318016](#).

**Graduate Teaching Experience:**

1. Scheduled to teach 5346 in 2023 Fall.

**Graduate Students Mentored:**

1. Chair of 4 PhD thesis students. Xin Qiao (2017 PhD), Tommy Boykin (2019 PhD), Tyrone Thames (defense June 16 2023), Jaekyun Jeon (2015 PhD, prior to tenure),
2. On 7 PhD students thesis committee: Mahboob Ur-Rehman (2021 PhD), Nabin Kandel (2019 PhD), Jie Li (2015 PhD), Greg Goldblatt (2015 PhD), James Atkinson (2015 PhD), Ramesh Adhikari (2015 PhD), and Aniruddha Dutta (2013 PhD).
3. Total 4 PhD students mentored

**Synergistic Activities**

1. Development of new graduate course materials for Electrodynamics II and III.
2. Mentor science competition projects and Judge for Science Fairs of local K-12 schools, and won state and national awards.
3. Serve on the graduate admission committee. Actively recruited graduate students from underrepresented groups with strong motivations in STEM but lack stellar academic preparation.
4. Created a novel auto assignment program ARTIST for solid state NMR (under review, see citation 5), open to all NMR users.
5. Mentored over ten interdisciplinary undergraduate and four PhD from URG.