

Curriculum Vitae

Dr. Xun Cao

Deputy Head of Industrial Ceramics Group

Date of birth: Nov. 28, 1983

Home: Shanghai, China

Nationality: China

Major: Functional Oxides Thin Films, Energy Efficient, Chromogenic Materials

Contact: Shanghai Institute of Ceramics, Chinese Academy of Sciences, No. 588 Heshuo Road, Shanghai 201899, P. R. China
Tel: +86-21-69906208 (Office),
Fax: +86-21-69906221
Email: caoxun2015@gmail.com



Education Background and Work Experience

Associate Professor (2012.8-now)

State key lab of high performance ceramics and superfine microstructure, Shanghai Institute of Ceramics, Chinese Academy of Science, Shanghai

Visiting Research Fellow (2016.4-2016.7) (Supervisor: Prof. R. Ramesh)

Materials Science Division,

Lawrence Berkeley National Laboratory, Berkeley, CA, USA

Visiting Research Fellow (2015.6-2016.3) (Supervisor: Prof. R. Ramesh)

Department of Materials Science and Engineering,

University of California, Berkeley, Berkeley, CA, USA

Assistant Professor (2010.7-2012.7)

R&D center of industrial ceramics (Prof. Ping Jin's group)

State key lab of high performance ceramics and superfine microstructure, Shanghai Institute of Ceramics, Chinese Academy of Science, Shanghai

Ph. D and M. S (2005.9-2010.6)

Material Science and Engineering, Functional Thin Films,

Shanghai Institute of Ceramics, Chinese Academy of Science, Shanghai

B. S (2000.9-2004.7)

Material Science and Engineering, inorganic nonmetallic materials,

Jilin University, Changchun, Jilin

Scholarships and honors:

- Youth Innovation Promotion Association, CAS in 2018
- Shanghai "Pujiang Talent" in 2018
- Young leader talent association, Jiading, Shanghai in 2017
- Advanced Energy Materials Congress (AEMC2018) Committee Member
- Membership of Materials Research Society (MRS)
- Membership of China Materials Research Society (C-MRS)

- Membership of International Association of Advanced Materials (IAAM)
- Received “Chinese Government Scholarship for Study and Visiting in USA” in 2014
- Received “Outstanding Chinese member of Chinese Academy of Sciences (CAS)” in 2011.

Reviewer for Journals

Nature Communications, Nano Energy, Nanoscale, Advanced Functional Materials, ACS Applied Physics & Interfaces, Journal of Materials Chemistry A/C, Applied Physics Letters, Journal of Physics D, Solar Energy Materials & Solar Cells, Journal of Applied Physics, Thin Solid Films

Selected Publications

(*corresponding author)

- 1) Tianci Chang, Xun Cao*, Ping Jin, *ACS Applied Materials & Interfaces*, 10, (2018) 26814-26817.
- 2) Zewei Shao, Xun Cao*†, Hongjie Luo and Ping Jin, *NPG Asia Materials*, 10, (2018) 581-605.
- 3) Guangyao Sun, Xun Cao*, Yuanzheng Yue, Xiang Gao, Shiwei Long, Ning Li, Rong Li, Hongjie Luo, and Ping Jin, *Scientific Reports* 8 (1), (2018) 5342.
- 4) Fang Xu, Xun Cao*, Jingting Zhu, Guangyao Sun, Rong Li, Shiwei Long, Hongjie Luo, and Ping Jin, *Materials Letters*, 222, (2018) 62-65.
- 5) Ning Li, Xun Cao*, Yamei Li, Tianci Chang, Shiwei Long, Yijie Zhou, Guangyao Sun, Lei Ge, and Ping Jin, *Chemical Communications*, 54, (2018) 5241-5244.
- 6) Fang Xu†, Xun Cao*†, Hongjie Luo, and Ping Jin, *Journal of Materials Chemistry C*, 6, (2018) 1903-1919. (Invited review paper)
- 7) Tianci Chang, Xun Cao*, Shanhu Bao, Shidong Ji, Hongjie Luo, and Ping Jin, *Advances in Manufacturing*, 6, (2018) 1-19. (Invited review paper)
- 8) Shiwei Long, Xun Cao*, Guangyao Sun, Ning Li, Tianci Chang, Zewei Shao, and Ping Jin, *Applied Surface Science*, 441, (2018) 764-772.
- 9) Tianci Chang†, Xun Cao*†, Liv R. Dedon, Shiwei Long, Aibin Huang, Zewei Shao, Ning Li, Hongjie Luo, and Ping Jin, *Nano Energy*, 44, (2018) 256-264. (co-first author)
- 10) Yunxiang Chen, Xianzhe Zeng, Yijie Zhou, Rong Li, Heliang Yao, Xun Cao*, and Ping Jin*, *Ceramics International*, 44, (2018) 2738-2744.
- 11) Guangyao Sun, Xun Cao*, Shiwei Long, Rong Li, and Ping Jin, *Applied Physics Letters*, 111, (2017) 053901.
- 12) Tianci Chang, Xun Cao*, Ning Li, Shiwei Long, Xiang Gao, Liv R Dedon, Guangyao Sun, Hongjie Luo and Ping Jin*, *ACS Applied Materials & Interfaces*, 9, (2017) 26029-26037.
- 13) Xun Cao*, Zhiqi Liu, Liv R Dedon, Andrew J Bell, Faye Esat, Yujia Wang, Pu Yu, Chuanshou Wang and Ping Jin, *Journal of Materials Chemistry C*, 5, (2017) 7720-7725.
- 14) Yunxiang Chen, Xianzhe Zeng, Jingting Zhu, Rong Li, Heliang Yao, Xun Cao*, Shidong Ji*, and Ping Jin*, *ACS Applied Materials & Interfaces*, 9, (2017) 27784-27791.
- 15) Ning Li, Yamei Li, Guangyao Sun, Yijie Zhou, Shidong Ji, Heliang Yao, Xun Cao*, Shanhu

- Bao, and Ping Jin*, *Nanoscale*, 9 (2017) 8298-8304.
- 16) Yijie Zhou, Ning Li, Yunchuan Xin, Xun Cao*, Shidong Ji and Ping Jin*, *Journal of Materials Chemistry C*, 5 (2017) 6251-6258.
 - 17) Yining Ma, Aibing Huang, Huaijuan Zhou, Shidong Ji, Shuming Zhang, Rong Li, Heliang Yao, Xun Cao*, and Ping Jin*, *Journal of Materials Chemistry A*, 5(14), (2017) 6522-6531.
 - 18) Ning Li, Yamei Li, Guangyao Sun, Yining Ma, Tianci Chang, Shidong Ji, Heliang Yao, Xun Cao*, Shanhu Bao, and Ping Jin*, *Chemistry- An Asia Journal*, 12 (2017) 1709-1714.
 - 19) Yunchuan Xin, Xun Cao*, Shanhu Bao, Shidong Ji, Rong Li, Yao Yang, Huaijuan Zhou and Ping Jin*, *CrystEngComm*, 19 (2017) 3931-3938.
 - 20) Aibin Huang, Lei Lei, Yu Yu, Songwang Yang, Shanhu Bao, Xun Cao*, and Ping Jin*, *Nanotechnology*, 28(20), (2017) 20LT02.
 - 21) Aibin Huang, Lei Lei, Jingting Zhu, Yu Yu, Yan Liu, Songwang Yang, Shanhu Bao, Xun Cao*, and Ping Jin*, *Langmuir* 33(15), (2017) 3624-3634.
 - 22) Guangyao Sun, Xun Cao*, Xiaoyan Li, Alexandre Gloter, Hui Gu, Huaijuan Zhou, and Ping Jin, *Solar Energy Materials & Solar Cells*. 161 (2017) 70-76.
 - 23) Ning Li, Yamei Li, Yijie Zhou, Wenjing Li, Shidong Ji, Heliang Yao, Xun Cao*, and Ping Jin, *Solar Energy Materials & Solar Cells*. 160 (2017) 116-125.
 - 24) Guangyao Sun, Xun Cao*, Huaijuan Zhou, Shanhu Bao, and PingJin, *Solar Energy Materials & Solar Cells*. 159 (2017) 553-559.
 - 25) Aibin Huang, Lei Lei, Jingting Zhu, Yu Yu, Yan Liu, Songwang Yang, Shanhu Bao, Xun Cao*, and Ping Jin*, *ACS Applied Materials & Interfaces*, 9(3), (2017) 2016-2022.
 - 26) Xun Cao*, Guangyao Sun, Tianci Chang, Shiwei Long, Yunchuan Xin, Mao La, Shanhu Bao, and Ping Jin, *Nano Advances*, 2 (2017) 23-28
 - 27) Guangyao Sun, WenjingLi, Shidong Ji, Xun Cao*, and Ping Jin*, *Research on Chemical Intermediates*, 43 (2017) 341-352.
 - 28) Guangyao Sun, Xun Cao*, Xiang Gao, Shiwei Long, Mengshi Liang, and PingJin, *Applied Physics Letters*, 109 (2016) 143903.
 - 29) Huaijuan Zhou, Meng Jiang, Yunchuan Xin, Guangyao Sun, Shiwei Long, Shanhu Bao, Xun Cao*, Shidong Ji and Ping Jin*, *Materials Letters*, 192, (2017) 123-127.
 - 30) Yining Ma, Wenjing Li, Shidong Ji, Huaijuan Zhou, Rong Li*, Ning Li, Heliang Yao, Xun Cao*, and Ping Jin, *Materials Research Express*, 4(8), (2017) 085033.
 - 31) Jingting Zhu, Aibin Huang, Haibin Ma, Yining Ma, Kun Tong, Shidong Ji, Shanhu Bao, Xun Cao*, and Ping Jin*, *ACS Applied Materials & Interfaces*, 8 (2016) 29742-29748.
 - 32) Shiwei Long, Huaijuan Zhou, Shanhu Bao, Yunchuan Xin, Xun Cao*, and Ping Jin*, *RSC Advances* 6 (2016) 106435-106442.
 - 33) Huaijuan Zhou, Xun Cao*, Meng Jiang, Shanhu Bao and Ping Jin*, *Laser and Photonics Reviews*, 8(2014) 617-625.

- 34) **Xun Cao***, Xiaomin Li, Xiangdong Gao, Xinjun Liu, Chang Yang, Rui Yang and Ping Jin, *Journal of Physics D: Applied Physics*, 44 (2011) 255104.1-2500104.5.
- 35) **Xun Cao***, Xiaomin Li, Xiangdong Gao, Xinjun Liu, Chang Yang and Lidong Chen, *Journal of Physics D: Applied Physics*, 44 (2011) 015302.1-015302.7.
- 36) **Xun Cao**, Xiaomin Li, Xiangdong Gao, Weidong Yu, Xinjun Liu, Yiwen Zhang, Lidong Chen and Xinhong Cheng, *Journal of Applied Physics*, 106 (2009) 073723.1-073723.5. (**100+ citations**)
- 37) **Xun Cao**, Xiaomin Li, Weidong Yu, Yiwen Zhang, Rui Yang, Xinjun Liu, Jingfang Kong, and Wenzhong Shen, *Journal of Alloy Compounds*, 486 (2009) 458-461.
- 38) **Xun Cao**, Xiaomin Li, Weidong Yu, Xinjun Liu, and Xiliang He, *Material Science & Engineering B*, 157 (2009) 36-39.
- 39) **X Cao**, X M Li, X D Gao, Y W Zhang, X J Liu, Q Wang, and L D Chen, *Applied Physics A*, 97 (2009) 883-887.

Patents (Applied more than 20, granted 5)

1. Ping Jin, **Xun Cao**, et al. "Films with high temperature coefficient of resistance without hysteresis at low temperature." **Chinese patent: ZL201310496560.6**, granted on Jan. 6, 2016.
2. Xiaomin Li, **Xun Cao** et al. "A sort of Hetero - blind UV Detector of Heterojunction", **Chinese patent ZL200910048822.6**, Granted on Aug.14, 2013.
3. Xiaomin Li, **Xun Cao** et al. "Modulation of resistance switching in multilayered films structures for RRAM applications", **Chinese patent ZL200910048823.0**, Granted on Jan.2, 2013.
4. Xiaomin Li, **Xun Cao** et al. "ZnO based homogeneous transparent RRAM devices and its fabrication", **Chinese patent: ZL200910048825.X**, Granted on Dec. 14, 2011.
5. Xiaomin Li, **Xun Cao** et al. "A sort of binary-oxidation-based RRAM structure for easily achieves electric-pulse-induced resistance switching behaviors", **Chinese patent ZL200910056301.5**, Granted on Aug.3, 2011.