Qing Shi

Personal Data

- Nationality: Chinese
- Affiliation: Materials Process Engineering, Graduate School of Engineering, Nagoya University, Japan.

Education Background

- Ph.D. programme in Materials Science, Nagoya University, Japan, 2023-Now
- MSc in Materials Science, Sichuan University, China, 2022
- B.S. in Applied Physics, Harbin University of Science and Technology, China, 2018

Summary of My Research Activities

1. Responsibility job supervised by Prof. Mizuguchi and Prof. Miyamachi in Nagoya University (2023-now): One of my main activities is the Scanning Tunneling Spectroscopy based Quasiparticle Interference studies of magnetic topological materials.

2. Responsibility job supervised by Prof. Ang in Sichuan University (2019-2022): One of my main activities was the improvement of thermoelectric (TE) properties in Bi_2Te_3-basd materials. In particular, I achieved that extrinsic impurities induce intrinsic defects interaction to regulate carrier concentrations and enable multi-scale phonon scatterings simultaneously broadening temperature plateau of high TE properties.

- The postgraduate courses have all been completed and the GPA is 3.7/4.0;
- Participating Sichuan University Innovation Research Program of China
- A review of routes of micro/nano-structured Bi_2Te_3-based thermoelectrics has been written;
- Three workings have been researched to identify the effect of alloying or doping on the electrical and thermal properties of *p*-type $Bi_{0.3}Sb_{1.7}Te_3$.

3. Responsibility job supervised by Prof. Wang in Harbin University of Science and Technology (2014-2018): I am also involved in other research activities, enhancing the photocatalytic activity of ZnO. Herein the V_2O_5/ZnO composites were prepared by using the colloidal carbon spheres as “transitional carriers” for the first time and were characterized systemically.

- The undergraduate courses have been completed and GPA is 3.3/4.0 (top 5%, 3/35);
- Participating Heilongjiang Student’s Platform for innovation and entrepreneurship training program, China.

Skills

- The synthesis of micro/nano-materials through mechanical alloys, melting, hydrothermal methods, and MBE;
- Having the experience about operating the STM, ARPES, TEM, SEM, XRD, XPS, IR, and so on, familiar with the corresponding data processing;
- Familiar with Condensed Matter;
- Grasping tiny theoretical calculation skills: First-principles calculation, model calculation, and data processing on magnetic materials;
- Mastering the SCI writing.
- IELTS：6.5

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Awards and Fellowships

- National Encouragement Scholarship, Harbin University of Science and Technology (2016);
- Fourth University scholarship second (2014-2018);
- Outstanding Student of the College (2018);
- Twice Graduate scholarship second (2019-2020);
- Graduate scholarship third (2021);
- Outstanding graduate students (2021);

Journal Articles

1. **Q. Shi**, X. Y. Chen, Y. Y. Chen, X. Zhao, W. K. He, C. J. Zhou, and R. Ang. Broadening Temperature Plateau of High *zT*s in PbTe Doped $Bi_{0.3}Sb_{1.7}Te_3$ Through Defect Carrier Regulation and Multi-Scale Phonon Scattering. *Materials Today Physics*. 2022.
2. **Q. Shi**, X. Z. Zhao, Y. Y. Chen, L. W. Lin, D. Ren, B. Liu, C. L. Zhou, R. Ang. Cu2Te Incorporation Induced High Average Thermoelectric Performance in *p*-Type Bi_2Te_3 Alloys. *ACS Applied Materials & Interfaces*. 2022.
3. **Q. Shi**, J. Li, X. W. Zhao, Y. Y. Chen, F. J. Zhang, Y. Zhong, R. Ang. Comprehensive Insight into *p*-Type Bi_2Te_3-Based Thermoelectrics Near Room Temperature. *ACS Applied Materials & Interfaces*. 2022.
4. **Q. Shi**, S. Wang, H. Wu, M. Yu, X. H. Su, F. Ma and J. X. Jiang. Synthesis and Characterizations of V_2O_5/ZnO Nanocomposites and Enhanced Photocatalytic Activity. *Ferroelectrics*. 2018.
5. Y. Y. Chen[#], **Q. Shi**[#], L. W. Lin, B. Liu, D. Ren*, R. Ang*. Ga intercalation Combined with Nanopores Synergistically Optimize *p*-Type Bi_2Te_3-based Thermoelectric Performance. *Chin. Phys. B* 2022.
6. X. Y. Chen[#], J. Li[#], **Q. Shi**, Y. Y. Chen, H. J. Gong, Y. P. Huang, L. W. Lin, D, Ren, B. Liu and R. Ang. Isotropic Thermoelectric Performance of Layer-Structured *n*-Type $Bi_2Te_{2.7}Se_{0.3}$ by Cu Doping. *ACS applied materials & interfaces*. 2021.
7. Z. Y. Chen, X. M. Guo, F. J. Zhang, **Q. Shi**, M. J. Tang and R. Ang. Routes for Advancing SnTe thermoelectric. *J. Mater. Chem. A*. 2021.
8. Q. Hu, J. Y. Liu, **Q. Shi**, F. J. Zhang, Y. Zhong, L. Lei and R. Ang. Charge-Density-Wave Melted Superconductivity in 1T-$TiSe_2$. *Europhys. Lett*. 2021.

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