| Teacher Information | | | |
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| **Name** | Hongshun Hao | **Gender** | Male |
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**Individual Profile** Dr. Hao was born in November 1979 in Liaocheng, Shandong province. He is a master graduate adviser, and teaches in inorganic nonmetal material department of Dalian polytechnic university. He obtained his PhD of material science at University of Science and Technology Beijing, and studied as a visiting PhD student in State Key Laboratory of New Ceramics and Fine Processing of Tsinghua University. At present he studies as a visiting scholar at University of Massachusetts Amherst, USA. He is a council member of Engineering Ceramic Department of Chinese Mechanical Engineering Society. To date, he has published over 50 academic papers as the first or corresponding author, among which over 30 papers are indexed in SCI or EI; he has applied for 10 national invention patents, and 5 of them are authorized; he has been reworded 3 prizes; and he is in charge of 5 provincial or ministerial research projects and 6 enterprise projects.

## Research Field

(1)Photocatalytic new energy materials(Photocatalytic oxidation degradation dye waste water,New nano semiconductor photocatalysis,Photoelectrochemical solar cell,Photoelectric fuctional materials,etc);(2)Fibre composite materials(Quartz/carbon fibre reinforced quartz ceramic,etc);(3)Food safety detection(Photoelectrochemical semiconductor biology sensor,SERS,etc).

## Representative Publications


1. Hong Li, **Hongshun Hao***, Shanshan Jin, Weihua Guo, Xiaofei Hu, Hongman Hou*, Gongliang Zhang, Shuang Yan, Wenyuan Gao, Guishan Liu. Synthesis and Luminescence properties of $Ho^{3+}$/ $Yb^{3+}$ co-doped bismuth tungstate nanopowder. Materials Research Bulletin, 2017,89:51-56.
2. Weihua Guo, **Hongshun Hao***, Shanshan Jin, Qing Su, Hong Li, Xiaofei Hu, YiJie Gan, Lei Qin, Wenyuan Gao, Guishan Liu. Preparation and infrared to visible upconversion luminescence of $Yb_2O_3$:$Ho^{3+}$ nanocrystalline powders. Ceramics International, 2017,43:4330-4334.
3. Lijun Wang, Weihua Guo, **Hongshun Hao***, Qing Su, Shanshan Jin, Hong Li, Xiaofei Hu, Lei Qin, Wenyuan Gao, Guishan Liu. Enhancing photovoltaic performance of dye-sensitized solar cells by rare-earth doped oxide of $SrAl_2O_4$:$Eu^{3+}$. Materials Research Bulletin, 2016, 76:459-465.
4. Yueying Li, Weihua Guo, **Hongshun Hao***, Lijun Wang, Qing Su, Shanshan Jin, Lei Qin, Wenyuan Gao, Guishan Liu, Zhiqiang Hu. Enhancing photoelectrical performance of

dye–sensitized solar cell by doping $SrTiO_3:Sm^{3+}@SiO_2$ core–shell nanoparticles in the photoanode. Electrochimica Acta, 2015,173:656-664.

5. Yueying Li, **Hongshun Hao***, Lei Qin, Huili Wang, Mingqi Nie, Zhiqiang Hu, Wenyuan Gao, G.uishan Liu. Synthesis and characterization of $Ho^{3+}$-doped strontium titanate downconversion nanocrystals and its application in dye-sensitized solar cells. Journal of Alloys and Compounds, 2015,622:1-7.

## Awards

1. Won a first prize and a second prize in 2015 and a second prize in 2013 in "the Competition of Academic and Technological Works of College Students in Liaoning Province" as the guider; Guided a National Undergraduate Training Programs for Innovation and Entrepreneurship in 2016 and 2 Provincial Undergraduate Training Programs for Innovation and Entrepreneurship in 2015 and 2017.
2. "Key techniques in recycling and cleaning carbonization cane mud to produce functional materials and their application in enterprises" earned a second-class Technology Invention Award in China Light Industry Council (No. 2014-F-2-1) in 2014.
3. "Low-cost green technology to prepare nonmetal mineral materials" earned a third class Beijing Science and Technology Award (materials No. 2011-3-006-03）in 2011.
4. "Low-cost green technology to prepare nonmetal mineral materials" earned a first class Science and Technology Award in Chinese Materials Research Society (2010-102-01-03）in 2010.