

Open Faculty Positions

Advanced Research Teams

Shaanxi University of Science and Technology

Shaanxi University of Science and Technology (SUST) is a multidisciplinary university featuring light industry research. SUST is supported by National University Basic Ability Construction Project-Mid and West, and Shaanxi Province Advanced Level University Construction Project. On the initiative of building a bridge across disciplines, between academia and industry, as well as promoting international collaboration, the following 9 research teams at SUST invite applications for tenure-track professor/associate professor positions commensurate with qualifications in the following areas:

Team 1- High-Value Utilization of Lignocellulosic Biomass Research Team

◆The international research team consists of the academic team leader Dr. Yonghao Ni, several newly-recruited oversea and experienced researchers in the fields of chemical engineering, polymer science and engineering, wood science and technology, and several current professors at SUST. The goal of the team is to establish a strong research program at SUST which promotes advanced bio-materials and bio-chemicals from renewable lignocellulosic biomass and develops green technologies for industrial applications.

◆ Research Interests include High-Value Utilization of Lignocellulosic Biomass, Lignin Chemistry and Materials, Cellulose-based Functional Materials, Integrated Forest Bio-refinery.

◆Research Directions:

- (1) Lignin-based Chemicals and Advanced Functional Materials such as carbon fiber, nanotube, flexible conductive and electrostatic shielding materials.
- (2) Novel Cellulose-based Functional Materials Development such as nano-crystalline cellulose, nano- and micro- fibrillate cellulose (NCC/NFC/MFC), antibacterial, sound-absorbing, hydrophobic or flame retardant materials; Cellulose based hydrogels and aerogels; high performance multifunctional cellulose composite material.
- (3) Paper-based Flexible Sensing and Conductive Materials used for medical diagnostics, gas and ion detection or flexible batteries and liquid crystal displays.
- (4) Deep Processing and Comprehensive Utilization of Agricultural and Forestry Waste.
- (5) High-Value Utilization of Pulping Black Liquor including separation, extraction and modification of lignin from black liquid and making lignin based chemicals and functional materials .

◆Open Research Positions:

3~5 excellent PhD degree researchers Related Research Background (Entry Level: Position B0, B1, B2)

- (1) Chemical synthesis and Catalysis; Interface Chemistry and Modification;
- (2) Polymer Physics and Chemistry; Polymer Material and Engineering;
- (3) Wood Science and Technology; Pulp and Papermaking Engineering

◆Team Leader: Professor Yonghao NI

Research interests:

Forestry Integrated Bio-refinery; Lignin chemistry and materials; Cellulose-based Functional

Materials; Advanced Pulp Bleaching Technologies; High Yield Pulp Properties, Processing Technology and Applications.

◆ Contact Information

Professor: Yonghao NI; Associate Professor: Chao DUAN

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Team 2- Isotopomics in Chemical Biology Research Team

Established in later 2016, the Isotopomics in Chemical Biology (ICB) is a research group dedicated to cross-disciplinary natural abundance isotope research. It is the only one of its kind around the world that brings in the omics techniques in chemical biology to isotope research. ICB is currently blessed with established researchers of diverse and complementary skills/expertise (synthetic organic chemistry, biochemistry, physiology and geochemistry) to understand internal laws governing the movements and changes in the ratios of C, H, O and N isotopes in natural processes, in particular those occurring in higher plants.

◆ Research Directions:

- (1) mechanisms underlining the isotopic differences between C3 and C4 plants on molecular and positional level.
- (2) natural abundance stable isotopes as a diagnostic tool in diet-related diseases.
- (3) natural abundance stable isotopes as tool for understanding the rationale of plant resources allocation.
- (4) chemical linkage between structural components of high plant cell walls.
- (5) intracellular isotopic heterogeneity of plant cells.
- (6) application of natural abundance isotopes for forensic investigation and food & drug authentication.

◆ Open Research Positions:

We are looking to fill up to 5 vacancies at B0, B1 or B2 level. Candidates with sound knowledge and solid skills in (high resolution) mass spectrometry, NMR, (medical or plant) biochemistry and cell biology are encouraged to apply.

◆ Team Leader: Professor Youping ZHOU

Research interests:

Professor Youping ZHOU employs the structural and isotopic signatures of biomolecules obtainable from cutting edge technology such as isotope ratio mass spectrometry (IRMS) and quantitatively nuclear magnetic resonance (q-NMR) to gain deeper insights about plant physiology and metabolism. He is an emerging leader in the mechanistic understanding of the isotopic fractionation during higher plant biosynthesis of lipids and carbohydrates.

◆ Contact Information

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Team 3- Heavy Metal Pollution Remediation Research Team

◆ Research Interests include Biogeochemical behavior and process control of heavy metal in soil; Environmental toxicology effects of heavy metals.

◆ Research Directions:

- (1) Biogeochemical behavior and process control of heavy metal contaminated soil in Northwest

china;

(2)Development of new technology for remediation of industrial and mining sites.

◆Open Research Positions:

1excellent PhD degree researcher with related research background in environmental science and engineering, with environmental toxicology background and practical experience in environmental restoration engineering (Entry Level: Position B0, B1, B2)

◆ Team Leader: Professor Junkang GUO

Research interests:

Professor Junkang GUO, is mainly engaged in heavy metal pollution remediation.

◆ Contact Information

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Team 4- Advanced Biomaterials & Biotechnologies Research Team

◆ The research team consists of the academic team leader Dr. Kecheng Li and several newly-recruited oversea scholars in the fields of materials sciences, chemistry, chemical engineering, physics and biotechnologies, and several current professors at SUST. The goal of the team is to establish a strong research program at SUST which promotes advanced nanomaterials from renewable lignocellulose biomass and promotes green technologies for industrial applications.

◆ Research Directions:

- (1) Nanocellulose manufacturing technologies for industrial applications.
- (2) Advanced nanocellulose-based materials for flexible electronics, high performance batteries, supercapacitors, biomedical materials, and anti-counterfeiting materials.
- (3) Green, biotechnologies in industrial processes for saving energy and reducing environmental impact.

◆Open Research Positions:

3~4 excellent PhD degree researchers with related research background (Entry Level: Position B0, B1, B2)

◆ Team Leader: Professor Kecheng LI

Research interests:

◆ Professor Kecheng LI's areas of research interests include lignocellulos biorefining for biofuels, advanced nanomaterials for flexible electronics, biotechnologies for energy-saving and greener manufacturing process, advanced nano-scale and surface characterization techniques, and pulp and paper.

◆ Contact Information

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Team 5- Development and Technology of Advanced Metal Materials Research Team

◆ This research team focuses on the research and development of metal functional materials, including high-temperature structural materials, material processing technology, and nanostructured materials.

◆Research Directions:

- (1)Metal functional materials;

(2)material surface engineering;

(3)nanostructured materials.

◆Open Research Positions:

1 PhD degree researcher with related research background (Entry Level: Position B0, B1, B2)

◆ Team Leader: Professor Yanling YANG

Research interests:

Metal functional materials

Professor Yanling YANG mainly engaged in the research field of advanced metal material and nanostructured materials.

◆ Contact Information

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Team 6- Institute of Atomic and Molecular Science

◆IAMS aims to study new materials at atomic and molecular scale, create novel materials by manipulating atoms and molecules, and elucidate the relationship between microstructure and performance of materials through microstructure characterization at atomic level, and further to develop innovative functional materials and devices. IAMS's ultimate objective is to promote original work based on new material frontier and important demand of national economy.

◆Research Directions:

(1)photoelectric film materials and device;

(2)functional nano-materials;

(3)microstructure characterization

◆Open Research Positions:

3 excellent PhD degree researchers in materials, physics, chemistry or the related discipline, with research background below (Entry Level: Position A1, A2, B0, B1, B2)

(1)Research on photoelectric film materials and device. Applicants shall be familiar with semiconductor photovoltaic materials and devices (Solar Cell), OLED materials, or semiconductor laser diode materials and device, or MOCVD growth method, etc;

(2)Research on microstructure characterization. Applicants shall be familiar with advanced transmission electron microscope analysis methods, especially in situ TEM techniques or spherical aberration-corrected scanning transmission electron microscope (Cs-corrected STEM) analysis method;

(3)Research on functional nano-materials. Applicants shall have high-level academic achievements in nano carbon materials, nano energy materials or environmental materials.

◆ Team Leader: Professor Bingshe XU

Research interests:

(1) photoelectric film materials and device;

(2) functional nano-materials;

(3) microstructure characterization

◆ Contact Information

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Team 7-Two-dimensional Layered Functional Materials (2D LFMs) Research Team

◆ Started from later 2016, the two-dimensional layered functional materials (2D LFMs) research team is focused on the controllable synthesis of 2D LFMs and their functional nanodevices. This is a young group and offer a platform to you to realize your academic career. Welcome anyone who has a strong background in Materials sciences, inorganic chemistry, nanodevice.

◆ Research Directions:

- (1) Controllable synthesis of two-dimensional layered functional materials by chemical solution method or chemical vapor deposition (CVD) method.
- (2) Develop a new type of gas sensor based on two-dimensional layered functional materials with good performance.

◆ Open Research Positions:

1 PhD degree researcher with functional ceramics, nano-science, device fabrication. (Entry Level: Position B0) Team Leader: Professor Wanyin GE

Research interests:

◆ Research interests:

Professor Wanyin GE's academic interest focused on the inorganic functional materials, involving intermetallic compounds; functional ceramics; ternary single-crystal compounds; two-dimensional layered nanomaterials; rare-earth based permanent magnetic nanoparticles; as well as the other semiconductor materials related optoelectronic devices (photo/electro-chromic nano-devices, solar cells, the Mid-infrared detector) design.

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Team 8- Materials Surface & Coating Technology Research Team

◆ The research in our group is focused on understanding and controlling intrinsic nanostructure, surface and interfacial chemistry of coatings and applying this knowledge to a range of problems in superlubricity and solar thermal conversion.

◆ Research Directions:

- (1) Nanostructure carbon films with superlubricity
- (2) High efficient solar-thermal conversion coating
- (3) Nanocomposite for highly efficient solar steam generation

◆ Open Research Positions:

1 excellent creative, enthusiastic, and self-motivated PhD who has strong background in one of the following projects: (Entry Level: Position B0, B1)

- (1) nanotribology;
- (2) solar absorber coatings;
- (3) highly efficient solar steam generation.

◆ Team Leader: Professor Chengbing WANG

Research interests:

Nanoscale-level understanding of the relation between of microstructure and macro/microscale performance of coating so as to control the mechanical, tribological or optical properties of the coatings through the design of the coatings with unique microstructures.

◆ Contact Information

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Team 9-Image Analysis and Machine Vision Research Team

◆ The research team of image analysis and machine vision focus on image processing such as image restoration, enhancement, super-resolution, segmentation, and classification etc. In addition, our team also focuses on deep learning, medical image processing and hyperspectral remote sensing image processing.

◆ Research Directions:

Image processing, pattern recognition and machine learning

◆ Open Research Positions:

1excellent PhD who have strong background in image processing, pattern recognition and artificial intelligence, computer applications, signal and information processing. (Entry Level: Position B0, B1)

◆ Team Leader: Professor Tao LEI

Research interests:

Image processing (Image filtering and segmentation), pattern recognition (Clustering and dimension reduction), machine learning (neural network and deep learning)

Professor Tao LEI' s current research interests include image analysis and understanding, Pattern Recognition and Artificial Intelligence.

◆ Contact Information

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Application:

For detailed requirements & responsibilities of the positions, please contact the research team leaders.

For questions regarding the university HR policy, please contact Qiao Mingzhe at +86-29-86168062(tel/fax) or mobile +86-13572186963, or via email: hr@sust.edu.cn

Application Process:

To apply for the above faculty positions, please submit the following documents:

- 1 A letter of interest discussing research interests and approach;
- 2 CV emphasizing research and teaching capability;
- 3 Three representative published research papers in English;
- 4 Contact information of referees.

The review of applications and nominations is underway and will continue until positions are filled. For more information about SUST please visit <http://www.sust.edu.cn/>.

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