



Introduction

The program of Materials Science and Engineering (MSE) in Shanghai Jiao Tong University (SJTU) has been consistently remained in national top 5, especially No. 1 in 2003, as evaluated by the Minister of Education. In 2007, MSE in SJTU was authorized as the first-class National Key Discipline. MSE program of SJTU ranked 31 in 2016 QS World University Rankings and has been listed in the world top 0.1% discipline of ESI for years.

The School of MSE (SMSE) is authorized to provide the following postgraduate degree programs:

- > Ph.D. Programs in Materials Science and Engineering;
- > M.Sc. Programs in Materials Science and Engineering;
- > M.Eng. Programs in Materials Engineering.

SMSE has about 300 faculty and staff members, and 1300 full-time students. Meanwhile, with a global vision, SMSE offers the best learning experience to the students, the most rewarding working environment for the faculty and staff members as well as the most effective service to the industry and society.

School of Materials Science and Engineering

Subject Fields	Research Contents
Advanced Light Metal	Advanced Aluminum Alloys and Processing, High-performance Magnesium Alloys, Degradable Medical Magnesium Alloys, New Magnesium-based Energy Materials.
Composite Materials	Aluminum-based Composite Materials, Titanium-based Composite Materials, Morph-genetic Materials and Bionic Composite Materials, Polymer-based Composite Materials, New Functional Composite Materials, Nano and Energy Materials.
Materials Processing and Manufacturing	Materials and Solidification Technology, Plastic Deformation, Powder Metallurgy, Welding Technology, Heat Treatment, Digital Intelligence of Materials Processing, High Temperature Alloy and Component, High Strength Steel.
Nano-materials and New Functional Materials	New Type Energy Materials, Electronic Information Materials, Biomedical Materials, Special Functional Thin Film, Magnetic Shape Memory and Magnetic Refrigeration Materials.
Design and Control of Supermicro Structure	Design of Super-microstructure, Super-microanalysis, Super-microstructure of Evolutionary Dynamics.

Achievements

In the last five years, SMSE has made great achievements in scientific research. SMSE has witnessed a substantial increase in the research funding, a total amount of 140 million USD. More than 1400 SCI papers have been published and almost 400 patents have been licensed during the last five years.

In addition, SMSE has achieved many academic honors and awards in the last ten years, including the 2nd Prize of National Natural Science Award, the 2nd Prize of National Science and Technology Progress Award, the 2nd Prize of National Technology Invention Award, the International Cooperation Award, and 25 provincial-level scientific and technological awards.

Under the guidance of the Teaching Committee, SMSE has established a full-English teaching system. At present, SMSE is carrying out high-level education cooperation with more than ten world-famous universities. The school has established dual degree programs with Northwestern University, The Ohio State University, Monash University, Institute National Polytechnique de Grenoble and so on. SMSE also has conducted exchange programs with Johns Hopkins University, University of Bremen, Norwegian University of Science and Technology, and University of Manchester.



Renowned Professors

Name	Research Fields
ZHOU Yaohe	Solidification Theory and Technology
RUAN Xueyu	Plastic Deformation and Digital Processing
DING Wenjiang	Light Alloy Fabrication and Forming Technology
ZHANG Deliang	Nano and Ultra-fine Powder Metallurgy
HAN Liyuan	Dye Sensitized Solar Cell
DENG Tao	Micro and Nano Devices Energy and Sensing Materials
WANG Hong	Materials Genome
ZHANG Di	Metal-based Composite Materials and Morph-genetic Materials
GAO Lian	Nano-ceramics Materials
WANG Haowei	Structure Function Integration Composite Materials
LIU Hezhou	Nano- functional Materials
XU Zuyao	Phase Transformation
PAN Jiansheng	Heat Treatment
ZHAO Liancheng	Photoelectric Information and Engineering
CHEN Mingwei	Nano-materials
XIAO Ping	Coating Materials
CHEN Xiaoqi	Welding Automation
SUN Baode	Precision Casting Forming
CHEN Shanben	Smart Welding
LI Jianguo	Metal Solidification Theory and Solidification Control
KONG Xiangyang	New Energy Materials
FAN Tongxiang	Functional Metal-based Composite Materials

Platforms for Scientific Innovation

One State Key Lab	The State Key Lab of Metal Matrix Composites
Three National Engineering Research Centers	National Engineering Research Center of Die and Mold CAD
	Light Alloy Net Forming National Engineering Research Center
	National Engineering Research Center for Nanotechnology
Three Shanghai Labs	Shanghai Key Lab of Materials Laser Processing and Modification
	Shanghai Engineering Research Center of Magnesium Materials and Applications
	Shanghai Key Laboratory of Advanced High-Temperature Materials and Precision Forming



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