



湖南大学 Hunan University



湖南大学坐落于中国历史文化名城长沙，前临碧波荡漾的湘江，后倚秀如琢玉的岳麓山，素有“千年学府、百年名校”之称。学校办学起源于公元 976 年创办的岳麓书院，是中国同址办学时间最长的高等学府，历经千年变迁，弦歌不绝，始终保持文化教育的连续性，是中国高等教育发展的生动缩影和世界高等教育的罕见奇迹。改革开放以来，学校先后进入全国重点大学、“211 工程”、“985 工程”和“世界一流大学”建设高校行列。学校现有全日制在校学生 36000 余人，其中本科生 21000 余人，研究生 15000 余人。建有 2 个教育部基础学科拔尖学生培养计划 2.0 基地，4 个国家级实验教学示范中心，马克思主义学院入选全国重点马克思主义学院。近年来，获国家级教学成果奖 3 项，首届全国教材建设奖 4 项，获批基础学科招生改革试点；入选国家级一流本科专业建设点 54 个，首批国家级一流本科课程 37 门；获“互联网+”“挑战杯”“创青春”创新创业竞赛国家级金奖 8 项。学校高度重视国际交流与合作，与牛津大学、剑桥大学、加州大学伯克利分校等海外 130 余所高校建立合作关系，招收来自 80 余个国家和地区的留学生。

学校科研实力雄厚，科技成果突出。拥有国家重点实验室和全国重点实验室 6 个（含共建）、国家工程技术研究中心 2 个、国家工程研究中心 1 个、国家级国际合作基地 3 个、国防科工局国防重点学科实验室 1 个、教育部重点实验室和工程研究中心 13 个、教育部高等学校学科创新引智基地 6 个、文化和旅游部重点实验室 1 个。“十三五”以来，获国家科学技术奖 16 项（牵头 11 项），教育部人文社科奖 9 项。学校坚持产学研相结合，大力促进科技成果转化，建有国家级大学科技园，获批教育部首批高等学校科技成果转化和技术转移基地、国家知识产权示范高校。学校运营管理的国家超级计算长沙中心是第三家国家超级计算中心，天河新一代超级计算机系统双精度浮点峰值计算性能达 200P Flops，算力水平国际先进、国内领先，为高校、科研机构、政府部门和企事业单位等 2000 余家用户提供高性能计算、大数据和人工智能等服务。

（时间截至 2023 年 3 月）



Hunan University is located in Changsha, a famous historical and cultural city in China. It sits in front of the rippling Xiang River and leans against the beautifully carved Yuelu Mountain, known as the "Millennial Academy, Centennial Famous School." The university's origin dates back to the Yuelu Academy founded in 976 AD, making it the longest-standing higher education institution on the same site in China. Through a millennium of changes, it has continuously maintained its cultural and educational heritage, epitomizing the evolution of higher education in China and being a rare miracle in global higher education. The university currently has over 36,000 full-time students, including more than 21,000 undergraduates and over 15,000 graduate students. It has established 2 bases for the Ministry of Education's Basic Discipline Top-Notch Student Training Plan 2.0 and 4 national-level experimental teaching demonstration centers. The Marxist College was selected as a national key Marxist college. In recent years, it has won 3 national-level teaching achievement awards, 4 awards in the first National Textbook Construction Award; it was selected for 54 national-level first-class undergraduate program construction sites and 37 national-level first-class undergraduate courses. The university has won 8 national gold awards in "Internet+", "Challenge Cup", and "Youth Innovation and Entrepreneurship Competition". Highly valuing international exchange and cooperation, the university has established partnerships with over 130 overseas institutions, including the University of Oxford, the University of Cambridge, and the University of California, Berkeley, and enrolls students from more than 80 countries and regions.

The university boasts strong research capabilities and notable scientific and technological achievements. It houses 6 national key laboratories and national key laboratories (including joint ventures), 2 national engineering technology research centers, 1 national engineering research center, 3 national-level international cooperation bases, 1 key laboratory of the Ministry of Defense Science, Technology, and Industry, 13 key laboratories and engineering research centers of the Ministry of Education, 6 Ministry of Education bases for discipline innovation and talent introduction in higher education institutions, and 1 key laboratory of the Ministry of Culture and Tourism. Since the "13th Five-Year Plan," the university has received 16 national science and technology awards (leading 11 of them) and 9 humanities and social science awards from the Ministry of Education. The university adheres to the integration of industry, academia, and research, vigorously promoting the transformation of scientific and technological achievements. It has established a national university science and technology park, recognized as the first batch of higher education institutions for technology transfer and transformation bases by the Ministry of Education and a national intellectual property demonstration university. The university-operated National Supercomputing Center in Changsha is the third national supercomputing center in the country. The Tianhe new generation supercomputer system has a double-precision floating-point peak computing performance of 200P Flops, with internationally advanced and domestically leading computing power. It provides high-performance computing, big data, and artificial intelligence services to over 2,000 users including universities, research institutions, government departments, and enterprises.

(Till Mar 2023)



湖南大学材料科学与工程学院

College of Materials Science & Engineering, Hunan University



湖南大学材料学科起源于 1903 年开办的湖南高等实业学堂的矿科，1943 年国立湖南大学矿冶学部开始招收研究生，1958 年设立硅酸盐、铸造、金属防腐、金属物理专业。1986 年获材料学二级学科博士学位授予权，2000 年获材料科学与工程一级学科博士学位授予权，同时成立材料科学与工程学院。2001 年设立博士后流动站，2011 年材料科学与工程专业被评为国家特色专业。

入选国家“军用关键材料”、“军用能源技术”国防特色学科，材料学科是湖南省重点学科；学院设有先进材料制备技术（国防）、喷射沉积技术及应用、微纳结构物理与应用技术、先进炭材料及应用技术湖南省重点实验室、湖南省集成光电材料与器件国际科技创新合作基地、湖南省清洁能源材料及技术国际联合实验室等 8 个部省级重点实验室及 5 个工程技术中心；拥有国内外先进的高分辨电镜原子成像技术平台。在光电信息材料与集成器件、先进原子成像技术、先进炭材料、计算材料学等领域优势突出、特色鲜明。2008 年起本学科 ESI 排名进入全球前 1%，2021 年进入前 1%，排名 105 位。培养了以李薰（中科院学部委员）、李元元（中国工程院院士）、成会明（中国科学院院士）、刘伟雄（少将）等为代表的一批杰出人才。

材料学科方向涵盖电子显微学表征及微观结构调控技术、先进炭材料及其复合材料、电子与新能源材料、轻量化材料成形技术、高性能结构与功能陶瓷、材料计算与设计、光电信息材料与集成器件等。近五年，承担国家重大军工“一条龙”项目、国家自然科学基金重点项目及重大仪器专项、国家重点研发计划、国防军工重大专项等各类科研项目 400 余项，总科研到账经费超过 2.3 亿元；在国内外高水平学术期刊发表论文 800 余篇，其中被 SCI 收录 600 余篇，ESI 高被引论文 30 余篇，获国家自然科学二等奖 1 项、国家科技进步二等奖 1 项、其他部省级科技奖励 9 项。近五年学院获批国家自然科学基金项目 90 项。



The materials science discipline at Hunan University originated from the Mining Department of the Hunan Higher Industrial School established in 1903. In 1943, the Mining and Metallurgy Department of National Hunan University began enrolling graduate students. In 1958, specializations in silicate, casting, metal corrosion protection, and metal physics were established. The discipline was granted the right to confer second-level doctoral degrees in materials science in 1986 and first-level doctoral degrees in materials science and engineering in 2000, coinciding with the establishment of the School of Materials Science and Engineering. In 2001, a post-doctoral research station was established, and in 2011, the materials science and engineering program was recognized as a national specialty.

The discipline is a key subject in Hunan Province and has been selected as a national defense specialty in "Military Key Materials" and "Military Energy Technology." The school houses eight provincial and ministerial key laboratories and five engineering technology centers, including the Advanced Material Preparation Technology (Defense), Spray Deposition Technology and Applications, Micro-Nano Structural Physics and Application Technology, Advanced Carbon Materials and Application Technology, and Hunan Provincial Key Laboratory of Integrated Optoelectronic Materials and Devices. It boasts an advanced high-resolution electron microscope atomic imaging technology platform.

The discipline excels in optoelectronic information materials and integrated devices, advanced atomic imaging technology, advanced carbon materials, and computational materials science. Since 2008, it has ranked in the top 1% globally in the ESI rankings, reaching the top 0.1% in 2021, ranking 105th. It has produced distinguished alumni like Li Xun, Li Yuanyuan, Cheng Huiming, and Liu Weixiong.

Covering various areas like electron microscopy characterization, advanced carbon materials and composites, electronic and new energy materials, lightweight material forming technology, high-performance structural and functional ceramics, material computation and design, and optoelectronic information materials and devices, the discipline has undertaken over 400 research projects in the last five years. These include major national defense projects, key projects of the National Natural Science Foundation, and national key R&D programs, accumulating over 230 million yuan in research funds. Over 800 papers have been published in high-level journals, with more than 600 indexed by SCI and over 30 highly cited ESI papers. The school has won one second-class National Natural Science Award, one second-class National Science and Technology Progress Award, and nine other provincial and ministerial science and technology awards, with 90 National Natural Science Foundation projects approved in the last five years.



湖南大学先进医学工程中心

Center for Advanced Medical Engineering, Hunan University



先进医学工程中心的目标是创建由临床医生、工程师、科学家共同组成的跨学科平台，加快再生医学技术的应用转化突破，帮助患者重获健康幸福。中心建有 300 平方米的全新实验室，主要研究领域包括：

- **前沿基础研究：** 生物医学材料研发（压电生物材料、离子生物材料等）、材料免疫学效应、多场生物效应。
- **生物医学工程技术：** 生物反应器、医用材料 3D 打印、天然生物材料制备技术、生物评价模型。
- **转化应用及产业化：** 骨修复和骨植入体、软组织再生修复材料（肌腱、血管、牙周膜）。

湖南大学先进医学工程中心由新加坡工程院院士、湖南大学材料科学工程学院教授张瑞兴创立，张教授长期从事医学材料转化研究，并在 3D 打印技术制造临床医用支架和生物可吸收材料方面开展系列工作，在 *Biomaterials* 等优秀期刊发表论文近 300 余篇。科研转化成果获得美国 FDA 和欧洲 CE 临床实践批准，帮助全球超过 80000 名患者实现超大尺寸骨缺损治疗。

湖南大学先进医学工程中心诚招博士后，有意者请将个人简历和代表性成果发送至王祖勇教授邮箱 Wangzy@hnu.edu.cn 主题注明：“博士后申请+本人姓名”。



The aim of the Center for Advanced Medical Engineering (CAME) is to bring an interdisciplinary platform of scientists, engineers and clinicians to help accelerate the translational breakthroughs in patients' health and well-being. It is housed at 300 m³ of brand-new laboratory space. The major research area includes:

- **Frontier Basic Science Research Area:** Biomaterials research for medical use (piezoelectric materials etc), biological effects of electromagnetic fields, regenerative medicine.
- **Biomedical Engineering Technology:** Bioreactor, stem cells technology, tissue decellularization, 3D printing technology for biomedical use, natural biomaterials extraction, bioimaging.
- **Clinical Translation, Application, and Industrialization:** Bone Tissue Engineering, Bone Repair and Implants, translational medicine, chicken embryo model.

The Center for Advanced Medical Engineering, Hunan University is founded by Prof Teoh Swee Hin (Academician of Academy of Engineering, Singapore, School of Materials Science & Engineering, Hunan University). Prof Teoh has long been engaged in the translational research of medical materials and has carried out a series of works in the field of manufacturing clinical scaffolds and bioresorbable materials using 3D printing technology. He has published nearly 300 papers in prestigious journals such as Biomaterials. His research achievements have received clinical practice approval from the U.S. FDA and European CE, helping more than 80,000 patients worldwide to achieve treatment for large-scale bone defects.

The Center for Advanced Medical Engineering welcomes all to join as postdocs. Please send CV and representative papers to Prof Wang Zuyong at Wangzy@hnu.edu.cn for application.