



SCUT Newsletter 华工新闻快讯

科技创新大会



1. 11 Achievements by SCUT Won First Prizes at the 2021 Guangdong Science and Technology Award

华南理工大学11项成果荣获2021年度广东省科学技术一等奖

On April 15, the Provincial Party Committee and the People's Government of Guangdong Province held the provincial Science and Technology Innovation Conference. At the Conference, the 2021 Guangdong Science and

Technology Awards were granted to 180 projects (persons), including 22 Natural Science Awards, 12 Technological Invention Awards, 142 Science and Technology Progress Awards, and 4 Science and Technology Cooperation Awards. 22 achievements of SCUT earned prizes, including 11 first prizes. According to incomplete statistics, in the past three years, SCUT has won nearly 80 Guangdong Science and Technology Awards, including 30 first prizes. The total number of awards and the number of first prizes rank SCUT first place in Guangdong.

4月15日，广东省委、广东省人民政府召开全省科技创新大会。大会颁发了2021年度广东省科学技术奖共颁奖180项（人），其中自然科学奖22项、技术发明奖12项、科技进步奖142项、科技合作奖4人。华南理工大学获2021年度广东省科学技术奖22项成果获奖，其中一等奖11项，据不完全统计，近三年华工获得广东省科技奖近80项，其中一等奖近30项，获奖总数及获一等奖数量均居全省首位。

Attachment: List of the Awarded

No. 序号	Project Name 项目名称	Team 团队	Prize 奖种
1	Tumor Microenvironment-Responsive Nanomaterials 肿瘤微环境响应的纳米生物材料	Professor Wang Jun's team, School of Biomedical Sciences and Engineering 生物医学科学与工程学院王均教授团队	1st Prize, Natural Science Award 自然科学一等奖
2	Marine Antifouling Materials with Dynamic Surface and The Related Techniques 动态表面海洋防污材料及配套防护技术	Professor Zhang Guangzhao's team, School of Materials Science and Engineering 材料科学与工程学院张广照教授团队	1st Prize, Technical Invention Award 技术发明一等奖
3	Bioactive Controllable Grafting Technology of Ploymer and Its Application In Blood Purification 高分子生物活性可控接枝技术及其在血液净化中的应用	Professor Ren Li's team, School of Materials Science and Engineering 材料科学与工程学院任力教授团队	1st Prize, Technical Invention Award 技术发明一等奖
4	Sustainable Building Technology for Large-scale Stadium and its Engineering Application 大型体育场馆可持续营建技术及工程应用	Professor Sun Yimin's team, School of Architecture 建筑学院孙一民教授团队	1st Prize, Science and Technology Progress Award 科技进步一等奖
5	Systematic Key Technologies and Applications of Performance-based Seismic Design for High-rise Concrete Structures 高层建筑混凝土结构抗震性能化成套关键技术与应用	Professor Han Xiaolei's team, School of Civil Engineering and Transportation 土木与交通学院韩小雷教授团队	1st Prize, Science and Technology Progress Award 科技进步一等奖
6	The Key Technology of Road Engineering Low-carbon Maintenance and Recycling and its Engineering Application 道路工程低碳维护及循环利用关键技术与工程应用	Professor Yu Jiangmiao's team, School of Civil Engineering and Transportation 土木与交通学院虞将苗教授团队	1st Prize, Science and Technology Progress Award 科技进步一等奖



2. SCUT and Rutgers Co-held Ceremony to Celebrate the 15th Anniversary of Bilateral Cooperation

华南理工与罗格斯大学举行纪念活动庆祝两校合作15周年

On April 15, to celebrate the 15th anniversary of the cooperation between SCUT and Rutgers University, the two universities held a hybrid ceremony with both on-site and virtual attendees.

4月15日，为庆祝华南理工大学与罗格斯大学合作15周年，两校以线上线下结合的方式举行了纪念活动。

At the ceremony the commemorative video was shown, illustrating the cooperation history between the two universities, including the growth of cooperation and results in innovation. The attendees recalled the efforts and achievements in fostering students, teacher exchange, teaching and scientific research, platform establishment, and people-to-people exchanges, etc.

活动中，与会人员通过观看纪念视频回忆了两校合作从播种、成长到收获、创新的点滴历程，回顾了双方多年来在学生培养、师资交流、教学科研、平台建设和人文交流等领域的努力与成绩。

To recognize those who have made outstanding contributions to the cooperation between the two universities, the two sides jointly nominated and awarded the Special Contribution Award. Afterwards, representatives from relevant schools of the two universities summarized and communicated the cooperation over the past years, shared experience and ideas, and put forward prospects and suggestions for future cooperation.

为表彰在两校合作中作出突出贡献的人员，双方联合提名颁发了特别贡献奖。活动现场，两校相关合作学院的代表对过去多年合作进行总结与交流，分享经验和思考，并对今后合作提出展望与建议。

The cooperation between SCUT and Rutgers began in 2007. Over the past 15 years, the two sides have signed more than 30 cooperative agreements, jointly built teaching and scientific research platforms, set up a overseas exchange base, and carried out joint training in multiple disciplines.

华南理工大学与罗格斯大学合作始于2007年，15年来双方签署合作协议30多份，共建教学科研平台，互设海外交流基地，在多个学科领域开展联合培养。



3. Students of the Innovation Class Participated in Drawing the World's First Non-human Primate Cell "Atlas" and Published Papers in Nature

参与绘制全球首个非人灵长类动物全细胞“地图” 创新班学子在Nature发表论文

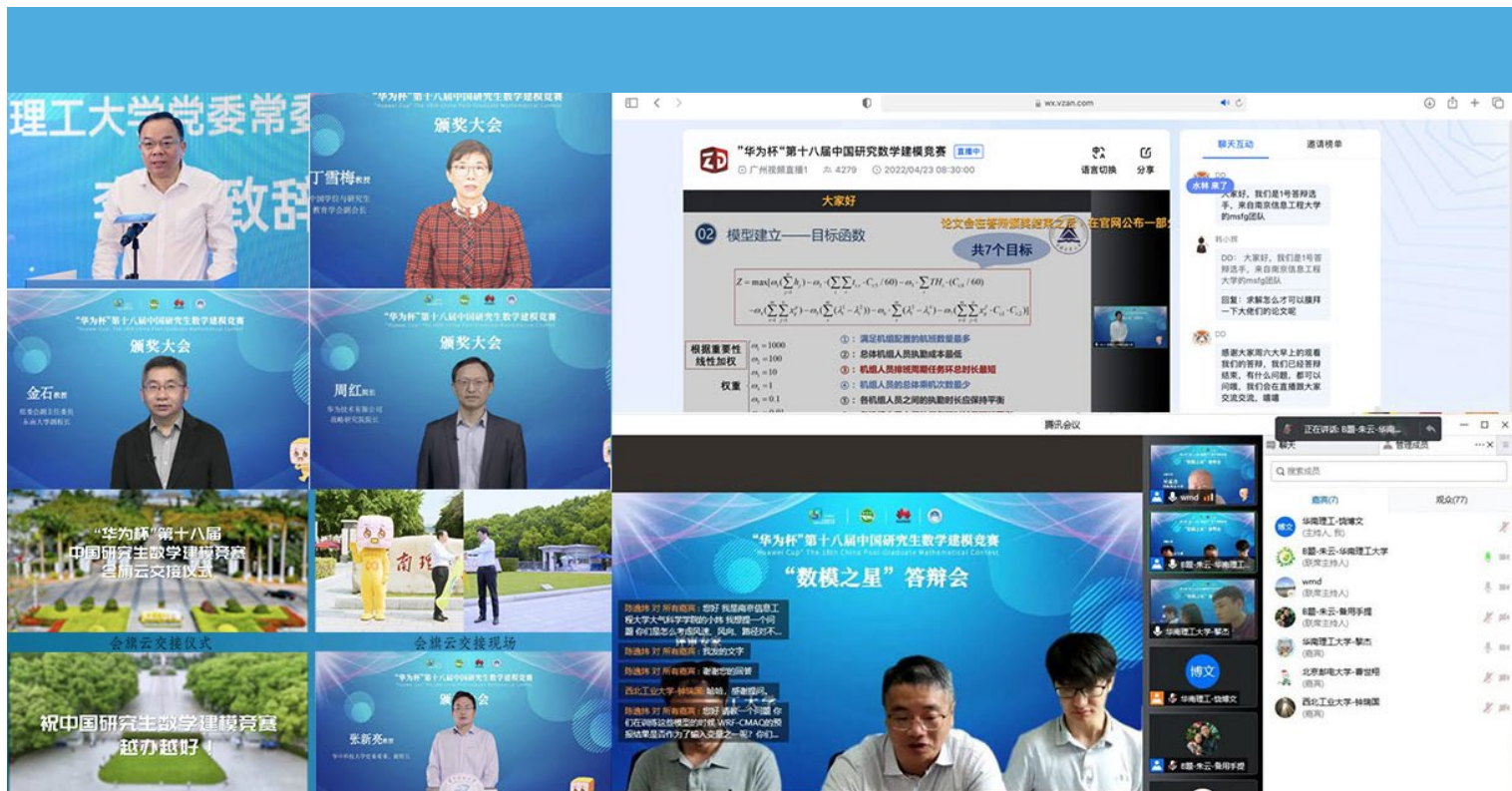
On April 13, Zhuang Zhenkun and Huang Fubaoqian, students of the Genome Science Innovation Class jointly nurtured by the SCUT and BGI-Shenzhen, published a research paper in the top international journal Nature, both as co-first authors and signed authors. Entitled "Cell transcriptomic atlas of the non-human primate *Macaca fascicularis*", the study was jointly completed by BGI-Shenzhen, BGI-Beijing, Shenzhen National Gene Bank, Jilin University, Guangzhou Institute of Biomedicine and Health, South China University of Technology, Karolinska Institute, University of Cambridge, Spanish National Center for Cardiovascular Research (CNIC), A*STAR Institute of Molecular and Cell Biology and other 35 scientific research teams from 6 countries.

4月13日，华南理工大学-深圳华大生命科学研究院基因组科学创新班学子庄镇堃和黄甫保钱分别作为共同第一作者及署名作者之一在国际顶级期刊Nature发表研究论文，题为"Cell transcriptomic atlas of the non-human primate *Macaca fascicularis*"。该研究由深圳华大生命科学研究院联合北京华大生命科学研究院、深圳国家基因库、吉林大学、中国科学院广州生物医药与健康研究院、华南理工大学、瑞典卡罗林斯卡医学院、英国剑桥大学、西班牙ICREA研究所、新加坡ASTAR等来自6个国家的35个科研团队共同参与完成。

The research paper published the world's first non-human primate (*Macaca fascicularis*) cell atlas covering 45 macaque's organs. The atlas provides molecular evidence for researchers to understand the different functions of common cells in different tissues. Meanwhile, based on this atlas, researchers found a variety of cells with differentiation potential in various tissues. These cells may provide cell sources for the repair of various organ injuries and provide new ideas for the study of mammalian tissue regeneration. Researchers have also constructed a database of 126 types of virus susceptible cells, which provides clinical guidance for disease associated with virus including COVID-19.

研究论文发布了首个非人灵长类动物（食蟹猕猴）全身器官百万单细胞图谱。该图谱为研究人员了解各个组织的共有细胞在不同组织的不同功能提供了分子层面的证据。同时，基于该图谱，研究人员还发现了多种存在于各组织中的具有分化潜能的细胞，这类细胞或可为各类器官损伤修复提供细胞来源，为哺乳动物组织再生研究提供新的思路。研究

人员还构建了126种病毒易感细胞类型的病毒数据库，为医生在检查新冠肺炎确诊患者肺部情况的同时，提供其他器官针对性检查的指导意见。



4. Successful Conclusion of "Huawei Cup" - the 18th China Postgraduate Mathematical Contest in Modeling

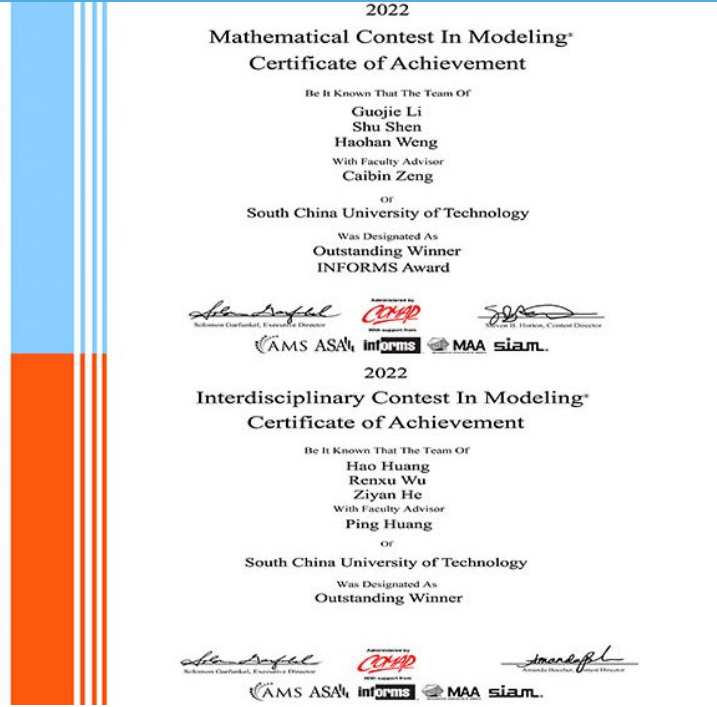
“华为杯”第十八届中国研究生数学建模竞赛圆满落幕

On April 24, "Huawei Cup" - the 18th China Postgraduate Mathematical Contest in Modeling hosted by SCUT, was successfully concluded. At the "Stars of Mathematical Modeling" online defense meeting held on the morning of the award ceremony, Liang Yunshun, Li Jie, and Huang Yongxi from SCUT won the championship of "Stars of Mathematical Modeling".

4月24日，由华南理工大学承办的“华为杯”第十八届中国研究生数学建模竞赛圆满落下帷幕。在颁奖大会当天上午举行的“数模之星”云端答辩会上，华南理工大学梁允舜、黎杰、黄泳熙获得“数模之星”冠军。

Integral to China Postgraduate Innovation and Practice series competitions, this year's 12-month China Postgraduate Mathematical Contest was hosted by SCUT. With 20,525 participating teams joined by 60,861 postgraduates, the Contest set a record in terms of the number of applicants and participants. Facing the challenges posed by the frequent and wide occurrence of COVID-19 cases, SCUT formulated practical and effective measures for a smooth operation of the Contest. Besides, the Contest was featured with innovative measures such as the "Stars of Mathematical Modeling" online defense meeting, online award ceremony and virtual handover ceremony.

中国研究生数学建模竞赛是中国研究生创新实践系列大赛的重要组成部分。本届竞赛由华南理工大学承办，历时12个月，参赛队伍多达20525支，在校研究生参赛人数达60861人，报名人数、参赛人数均创历史新高。竞赛过程中，面对多地频发的新冠疫情带来的困难和挑战，华南理工大学制定切实有效的措施，顺利完成各项赛事任务。大会创新性地举行了“数模之星”云端答辩会、云端颁奖仪式及云交接仪式。



5. SCUT Students Took the Highest Honor of the American Mathematical Contest in Modeling Again

华南理工学子再夺美国大学生数学建模竞赛最高荣誉

On May 6, the results of the 2022 American Mathematical Contest In Modeling and Interdisciplinary Contest In Modeling (MCM/ICM) were announced. Students from SCUT won 2 Outstanding Winners, 14 Finalists, 35 Meritorious Winner and 91 Honorable Mention awards. This is the third year that SCUT has won the highest honor of the American Mathematical Contest in Modeling after winning the first Outstanding Winner and COMAP Scholarship Award in 2020.

5月6日，2022年美国大学生数学建模竞赛和交叉学科建模竞赛（MCM/ICM）成绩揭晓，华南理工大学学子获竞赛特等奖（Outstanding Winner）2项，特等奖提名奖（Finalist）14项、一等奖35项、二等奖91项。这是继2020年华南理工大学首获特等奖并同时夺取冠名奖（COMAP Scholarship Award）后，连续收获竞赛的最高奖项的第三年。

The American Mathematical Contest in Modeling is an international mathematical contest in modeling sponsored by the Consortium for Mathematics and Its Application and also one of the world's most influential contests in such a field. Only 44 teams out of the 27,205 teams signed up for this year's Contest, were awarded Outstanding Winner (a rate of about 0.16%). Since last November, SCUT has organized students to participate in the Mathematics and Physics Contest and the Asia Pacific Cup warm-up & Certification Cup warm-up to select undergraduates for the Contest. During the winter break, a series of seminars and intensive training sessions, together with training tasks and online guidance were also provided for SCUT's participating students. Finally, 366 teams with more than 1,000 students from SCUT successfully submitted their papers.

美国大学生数学建模竞赛是由美国数学及其应用联合会主办的国际性数学建模竞赛，也是世界范围内最具影响力的数学建模竞赛之一。本届大赛吸引了来自全球各国的27205支队伍报名，共评出44项特等奖，获奖率约为0.16%。华南理工大学自去年11月开始就组织学生参加数理大赛及亚太杯热身赛&认证杯热身赛来选拔本科生队伍，并在寒假开展系列专题讲座和强化培训，安排了假期训练任务及线上指导。最终华南理工大学有366支队伍、1000余名学生成功参赛提交论文。

Attachment: List of the Awarded

No. 序号	Project Name 项目名称	Team 团队	Prize 奖项
1	PADRRRI Model PADRRRI模型	Li Guojie, Weng Haohan, Shen Shu's team (Advisor: Zeng Caibin) 李国杰、翁浩瀚、沈澍团队 (指导老师: 曾才斌)	Outstanding Winner (INFORMS Award)
2	Optimal Carbon Sequestration Forest Management Model 最优固碳森林管理模型	Huang Hao, Wu Renxu, He Ziyang's team (Advisor: Huang Ping) 黄颢、吴仁栩、何子妍团队 (指导老师: 黄平)	Outstanding Winner

InCites Essential Science Indicators						InCites Essential Science Indicators					
Total: 624	Institutions	Countries/Regions	Web of Science Documents	Cites	Cites/Paper	Research Fields	Web of Science Documents	Cites	Cites/Paper	Top Papers	
54	SOUTH CHINA UNIVERSITY OF TECHNOLOGY	CHINA MAINLAND	2,261	29,041	12.84	10 MATHEMATICS	967	4,893	5.06	12	
55	GEORGIA INSTITUTE OF TECHNOLOGY	USA	2,017	28,822	14.29	2 CHEMISTRY	9,847	227,956	23.15	204	
56	NORTHEASTERN UNIVERSITY - CHINA	CHINA MAINLAND	2,306	28,629	12.42	3 MATERIALS SCIENCE	9,576	219,226	22.89	173	
57	TONGJI UNIVERSITY	CHINA MAINLAND	2,098	28,568	13.62	4 AGRICULTURAL SCIENCES	2,417	51,731	21.40	102	
58	PEKING UNIVERSITY	CHINA MAINLAND	2,363	28,467	12.05	5 COMPUTER SCIENCE	2,261	29,041	12.84	56	
59	CHINESE UNIVERSITY OF HONG KONG	HONG KONG	1,967	28,456	14.47	6 PHYSICS	2,580	39,926	15.48	51	

6. Won the Outstanding Winner in the World Competition and Moved into the Top 0.1% of ESI Worldwide—The Leap Plan Helped These Disciplines of SCUT Advance Rapidly

获世界大赛特等奖，进ESI全球前1%，跃升计划助力华南理工这些学科突飞猛进

On May 6, students of SCUT won 2 Outstanding Winners in the 2020 Mathematical Contest in Modeling and Interdisciplinary Contest in Modeling (MCM / ICM) again. According to the latest data released by ESI (Essential Science Indicators) Database, the Mathematics and Computer Science of SCUT have ranked among the top 1% of international high-level disciplines.

5月6日，华南理工大学学子再获美国大学生数学建模竞赛和交叉学科建模竞赛 (MCM/ICM) 特等奖 (Outstanding Winner) 2项。ESI基本科学指标数据库最新公布的数据显示，华南理工大学数学与计算机科学已进入全球排名前1%的国际高水平学科行列。

SCUT always attaches great importance to the construction of basic science disciplines, with its development plan clearly putting forward important strategies, such as "Carry out the basic science Leap Plan and focus on the construction of distinctive high-level basic disciplines". SCUT thoroughly carries out the requirements of the Opinions on Strengthening Talent Cultivation in Basic Disciplines, implements the deepening of basic disciplines, constantly optimizes the layout of basic disciplines, and respects the basic discipline education research and talent cultivation regulations. In recent years, the cultivation of top-notch talents in basic disciplines of SCUT has become more distinctive. The scale of its high-level talents has steadily expanded, the ability to undertake national major

projects significantly enhanced, and the innovation platform of basic disciplines further consolidated.

华南理工大学一直高度重视理科基础学科建设，在学校发展规划中明确提出“实施基础学科跃升计划，着力建设有特色的高水平基础学科”等重要策略。华南理工大学深入贯彻落实《关于加强基础学科人才培养的意见》要求，大力实施基础学科深化行动，不断优化基础学科布局，尊重基础学科教育研究和人才培养规律，走好基础学科人才自主培养之路。近年来，华南理工大学基础学科拔尖人才培养特色更加鲜明，高层次人才规模稳步扩大，承接国家重大项目的能力显著增强，基础学科创新平台进一步夯实。



7. SCUT and Rutgers Held the Closing Ceremony of the ROSE Project in May

疫情难掩芳华 求知不可辜负 ROSE项目花开五月

On May 24, the closing ceremony of the ROSE Project (Rutgers Overseas Semester Experience) and the completion ceremony of 2022 Spring Semester were held in the Higher Education Mega Center Campus, SCUT.

5月24日，美国罗格斯大学借读项目（ROSE项目）结项典礼暨2022年春季学期结业典礼在华南理工大学大学城校区举行。

At the ceremony, representatives of the two universities jointly awarded project certificates to the 78 students of the ROSE Project (Phase IV) and honored the outstanding faculty members. Since the autumn of 2020, SCUT and Rutgers University have carried out four phases of the ROSE Project successfully, with a total of 342 Chinese freshmen of Rutgers studying at SCUT. The ROSE project has achieved three "new" breakthroughs: leading new cooperation in education, promoting new integration in teaching, and making new achievements in training. Furthermore, this project has laid a solid foundation for promoting Sino-US higher education cooperation under a new context and deepening SCUT's practical exploration of internationalization.

活动中，两校代表共同为ROSE项目第四期的78名借读学子颁发结业证书，并表彰项目优秀教师以及优秀员工。自2020年秋以来，华南理工大学与罗格斯大学合作成功开展四期ROSE项目，共有罗格斯大学中国籍大一学生342人次来华南理工学习。该项目实现了三个“新”突破——引领教育新合作、推动教学新融合、实现培养新成果，为推进新形势下的中美高等教育合作以及深化学校国际化实践探索奠定了坚实基础。



8. SCUT Students Make Outstanding Achievements in the Asian International Model United Nations

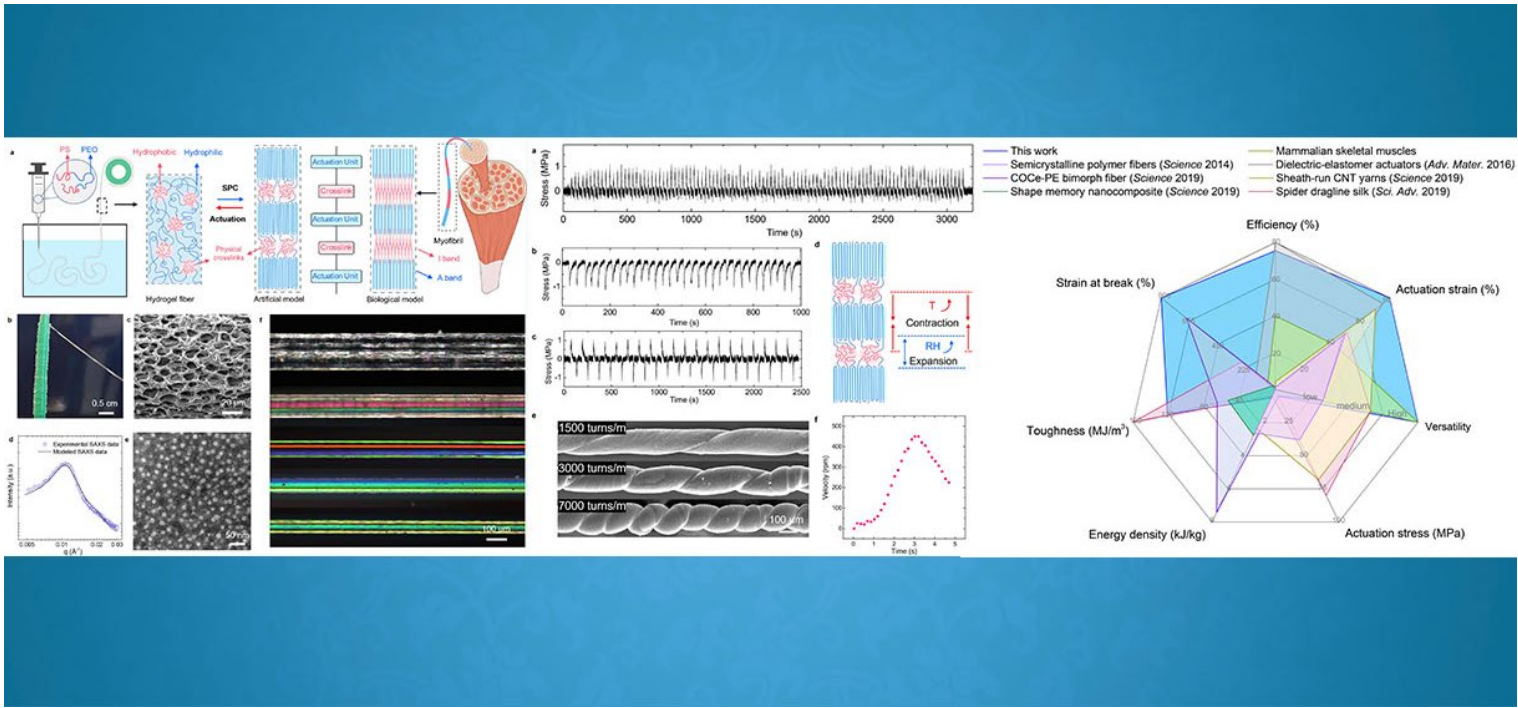
华南理工学子在亚洲国际模拟联合国大会斩获佳绩

From May 13 to 15, the Asian International Model United Nations 2022 (AIMUN) was held at Peking University. All the SCUT representatives of the English conference were awarded prizes: Xie Yixuan from the Law School won the "UNHCR Best Position Holder"; Liu Yifei from the School of Foreign Languages were awarded the "WTO Best Position Holder"; and Tan Wenwen from the School of Foreign Languages took the "UNHCR Honorable Mention". This is the first time that SCUT has made outstanding achievements in this high-level Model United Nations Conference.

5月13-15日，2022亚洲国际模拟联合国大会（AIMUN）在北京大学召开。华南理工大学参会代表中，英文会场的代表全部获奖。法学院谢怡萱荣获了“UNHCR最佳立场奖”，外国语学院刘益菲荣获“WTO最佳立场奖”，外国语学院谭雯文荣获“UNHCR荣誉提名奖”。这是华南理工大学首次在此高水平模拟联合国大会荣获佳绩。

The Asian International Model United Nations (AIMUN) is an international exchange activity for Asian and global students sponsored by Peking University, which has been held 13 times since 2007. With its increasing size and influence, the conference has become an important benchmark for Model United Nations Activities in China and even around the world.

亚洲国际模拟联合国大会（AIMUN）由北京大学主办，是一项面向亚洲乃至全球大学生的国际交流活动，自2007年至今已举办13届。随着大会的规模和影响力不断扩大，该大会已成为国内乃至全球模拟联合国活动的重要标杆。



9. Prof. Chao Lang's Research Team Developed Recyclable High-Performance Artificial Muscle Fibers

华南理工大学郎超教授团队开发可回收的高性能人工肌肉纤维

On June 2, Prof. Chao Lang (School of Emergent Soft Matter, SCUT) and Prof. Robert J. Hickey (Pennsylvania State University) have reported a new type of artificial muscles prepared through block copolymer self-assembly. The work was recently published in *Nature Nanotechnology* entitled "Nanostructured Block Copolymer Muscles".

6月2日，华南理工大学前沿软物质学院的郎超教授联合宾夕法尼亚州立大学Robert J. Hickey教授在《Nature Nanotechnology》上发表题为"Nanostructured block copolymer muscles"的文章（华南理工大学前沿软物质学院为第一完成单位）。

Researchers innovatively proposed a new strategy for the preparation of recyclable artificial muscles, by simulating the striation pattern of mammalian skeletal muscle fibers with block copolymer self-assembly. Compared with other artificial muscles reported in recent years, the self-assembled artificial muscle shows excellent performance in several aspects. The self-assembled artificial muscle not only outperforms the natural muscle in many aspects like mechanical and actuation performance, but also exhibits good reversibility, responsiveness, and various actuation modes, which has provided a new way for developing biomimetic actuation materials.

研究人员创新性地提出了基于嵌段聚合物自组装，通过模拟哺乳动物骨骼肌纤维的条纹结构制备可回收人工肌肉的新策略。与近年来报道的其他人工肌肉相比，自组装人工肌肉在多个方面展示出了优异的表现。自组装人工肌肉不但在力学和致动性能等多方面超越天然肌肉，还具有良好的循环性、响应性和致动模式，为开发动态仿生材料提供了新的思路。

Deputy Chief Editor: Huang Fei, Deputy Director, International Office

Copy Editors: Chen Wei, Zhang Jihong

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制作：华南理工大学国际交流与合作处

顾问：李卫青 华南理工大学副校长

主编：姚旻 国际交流与合作处处长

副主编：黄非 国际交流与合作处副处长

执行编辑：陈薇 张继红

校对：Paul Winning

设计：玖悠广告

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