



SCUT Newsletter 华工新闻快讯

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Biomimetic cartilage-lubricating polymers regenerate cartilage in rats with early osteoarthritis

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1. SCUT's Strategy for Early Treatment of Osteoarthritis was Published in Nature's Subordinate Journal

为早期骨关节炎治疗提供可行策略 华南理工科研成果在Nature子刊发表

On October 4, Prof. Ren Li, Deputy of National Engineering Research Center for Tissue Restoration and Reconstruction, School of Materials Science and Engineering, published a paper entitled "Biomimetic cartilage-lubricating polymers regenerate cartilage in rats with early osteoarthritis" online in Nature Biomedical Engineering with SCUT as the first affiliation. The paper proposed a method to simulate the

brush-like lubricating complex nanofibers within articular cartilage, which is expected to provide a new strategy for the treatment of early osteoarthritis. This is a breakthrough in the field.

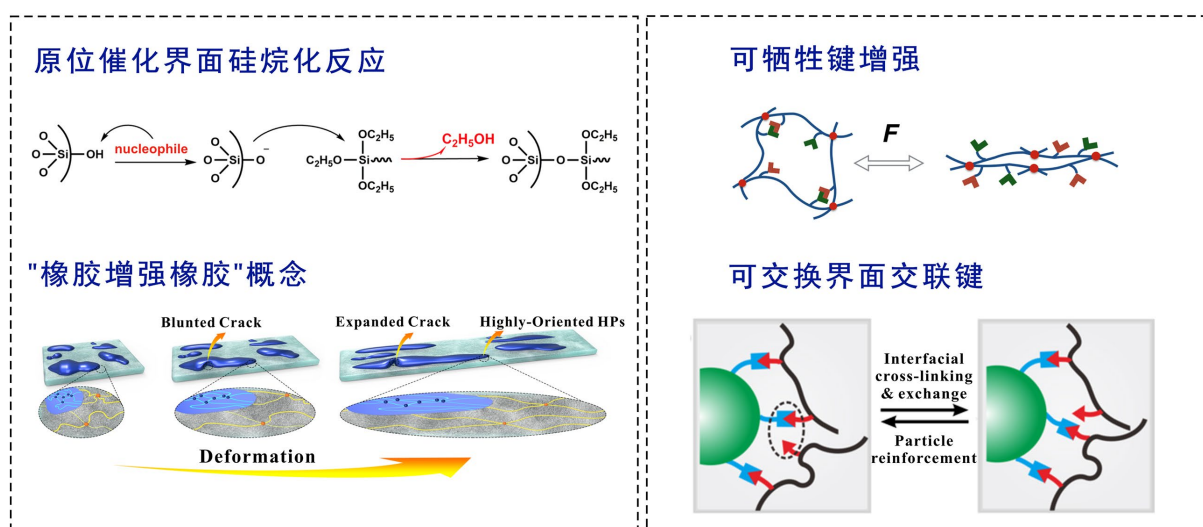
10月4日，华南理工大学材料科学与工程学院、国家人体组织功能重建工程技术研究中心任力教授课题组以华南理工大学为第一单位在Nature Biomedical Engineering (《自然-生物医学工程》) 杂志在线发表题为"Biomimetic cartilage-lubricating polymers regenerate cartilage in rats with early osteoarthritis"的 研究论文，提出了一种模拟关节软骨刷状润滑复合纳米纤维的方法，有望为治疗早期骨关节炎提供一种新策略，体现了学校在该研究领域取得突破。

Osteoarthritis (OA) is the most common degenerative joint disease, caused by cartilage degeneration, injury, obesity, etc. It is the leading cause of disability in adults. Based on the mechanism that the excellent lubrication performance of natural articular cartilage requires the coordination of synovial biomolecules to form a lubrication layer on the outer surface of cartilage, Professor Ren Li's team constructed two brush-like lubrication complex nanofibers, named HA/PA and HA/PM, which showed excellent lubrication performances and biocompatibilities. It has been found that these two nanofibers can form a lubrication layer on the outer surface of cartilage and then effectively lubricate the damaged human cartilage, reducing its friction coefficients to the typical low level of natural cartilage. Results show that when HA/PA and HA/PM used together, the lubrication effects on human cartilage were the best.

骨关节炎 (OA) 是最常见的退行性关节疾病，由软骨退化、损伤、肥胖等因素导致，是成年人群致残的首要原因。任力教授课题组基于天然关节软骨优异润滑性能的实现需要滑液分子协同进而在软骨表面结合形成润滑层的机理，针对性地从成分与结构仿生设计构建出两种具有优异润滑性能和优良生物相容性的刷状润滑复合纳米纤维HA/PA和HA/PM。经研究发现，这两种纳米纤维能够在软骨表面形成润滑层并有效润滑受损的人体软骨，将其摩擦系数降低到天然软管的典型低水平，结果证明HA/PA和HA/PM一起对人体软骨有出色润滑作用。

低滞后橡胶材料

动态键交联橡胶



2. SCUT Scholar Won 2022 Sparks-Thomas Award

华南理工学者获2022年度Sparks-Thomas奖

From October 4-7, the annual International Elastomer Conference (IEC) of Rubber Division of American Chemical Society (ACS Rubber Division) was held in Pittsburgh, the USA. Prof. Baochun Guo of SCUT won the 2022 Sparks-Thomas Award for his research and development of the rubbers with low hysteresis and the rubbers crosslinked by dynamic bonds.

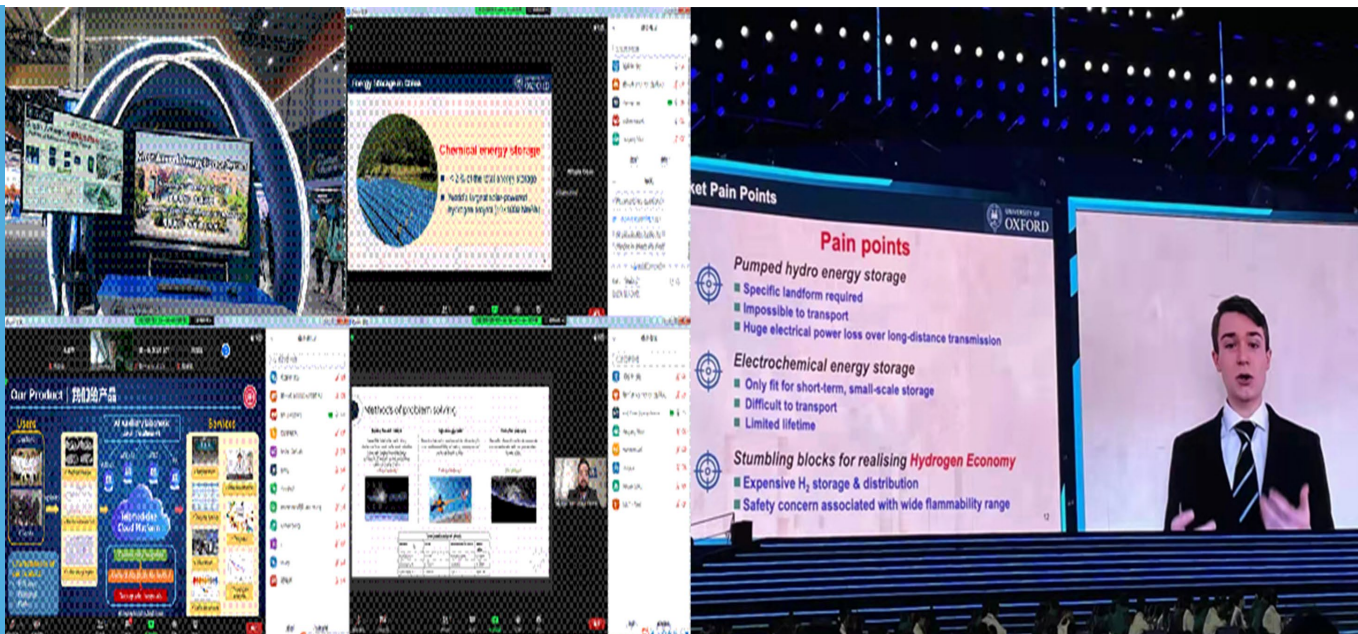
10月4-7日，美国化学会橡胶分会（ACS Rubber Division）一年一度的国际弹性体大会在美国匹兹堡举行。华南理工大学郭宝春教授凭借其在低滞后橡胶和动态键交联橡胶的研究和开发获2022年度Sparks-Thomas奖。

Established in 1986, the Sparks-Thomas Award aims to commend and encourage outstanding scientific contributions and innovations in elastomers by young scientists, technical experts and engineers and to permanently commemorate William J. Sparks and Robert M. Thomas, chemists who developed butyl rubber. Its winners are those who have made outstanding contributions to elastomer science and technology and only one winner is elected per year worldwide (or vacant). Prof. Baochun Guo is the second Chinese scholar to win this award since its inception.

Sparks-Thomas奖设立于1986年，旨在通过表彰和鼓励年轻科学家、技术专家和工程师在弹性体领域的杰出科学贡献和创新，永久纪念开发丁基橡胶的化学家威廉·斯帕克斯（William J. Sparks）和罗伯特·托马斯（Robert M. Thomas）。获奖人应在弹性体科学和技术方面做出突出贡献，全球每年仅奖励1人（可以空缺）。郭宝春教授是该奖项设立以来第二位获得此奖项的中国学者。

Prof. Baochun Guo proposed the in-situ catalytic interfacial silanization to reduce the use of silane and improve the dynamic performance of tire rubber, which is significant in reducing volatile organic compound (VOC) emissions during tire manufacturing and improving the energy-saving performance of tires. He also proposed the concept of 'Rubber-Reinforced Rubber', which innovatively realizes the combination of high strength and ultra-low heat generation. This is of great significance for the future development of the rubber products used in dynamic environment toward higher service safety.

郭宝春教授提出了原位催化界面硅烷化反应技术，以减少硅烷使用量和提升轮胎橡胶的动态性能，从而对降低轮胎制造中VOC（挥发性有机化合物）排放和提升轮胎节油性能具有重要价值；提出“橡胶增强橡胶”的概念，创新实现了高强度和超低动态生热的性能组合，对未来开发具有更高服役安全性的动态橡胶制品具有重要意义。



3. The International Projects Recommended by SCUT Won 3 Golds and 1 Silver in the 7th China International College Students' Internet+ Innovation and Entrepreneurship Competition

华南理工推荐国际项目在第七届“互联网+”大赛中获3金1银

On October 15, the 7th China International College Students' Internet+ Innovation and Entrepreneurship Competition was held. Green Ammonia Energy Storage System by Oxford University, an international project recommended by SCUT, won the third place in this competition. After winning the third place in the 6th China International College Students' Internet+ Innovation and Entrepreneurship Competition last year, SCUT achieved another success in recommending international projects for this competition! Among 39 international projects recommended by SCUT, 11 entered the top 500, 4 entered the finals and won 3 gold and 1 silver awards. At the same time, SCUT received the Excellent International Project Organization Award. (Only 10 universities awarded nationwide)

10月15日，第七届中国国际“互联网+”大学生创新创业大赛冠军争夺赛举行。华南理工大学推荐的国际项目——牛津大学《Green Ammonia Energy Storage System》获本次大赛季军。继去年在第六届中国国际“互联网+”大学生创新创业大赛中获得季军后，华南理工大学“互联网+”大赛国际项目推荐工作再创佳绩！至此，华南理工大学推荐的39个国际项目中，11个进入前500强，4个进入总决赛并获3金1银，同时获组委会颁发“国际项目优秀组织奖”（全国仅10家）。

Attachment: List of the Awarded International Projects Recommended by SCUT

附：华南理工大学推荐国际参赛项目获奖清单

No.	Project Name	Participant	Country	Project Leader	Received Award
1	Green Ammonia Energy Storage System	University of Oxford	UK	Yuancheng Sun	Third place and gold award
2	Smart Healthcare Platform for Hierarchical Cancer	Rutgers University	USA	Haoyang Wen	Gold award

	Telemedicine				
3	Space Cleaner	Moscow Aviation Institute (National Research University)	Russia	Vladimir Tereshonkov	Gold award
4	Intelligent micro-nano drug delivery robots	Ghent University	Belgium	Junnan Song	Silver award



4. Prof. C. L. Philip Chen Won 2021 IEEE Joseph G. Wohl Outstanding Career Award

华南理工陈俊龙教授获2021年度IEEE Joseph G. Wohl终身成就奖

In October, IEEE Systems, Man, and Cybernetics Society announced at its annual meeting that Prof. C. L. Philip Chen of the School of Computer Science & Engineering, SCUT, won the 2021 IEEE Joseph G. Wohl Outstanding Career Award for his outstanding achievements in intelligent systems and control and for his long-term contributions to the society and IEEE.

10月，IEEE系统、人机与控制理论协会（IEEE Systems, Man, and Cybernetics Society）在年会上公布了华南理工大学计算机科学与工程学院陈俊龙教授荣获2021年度IEEE Joseph G. Wohl终身成就奖，因其在智能系统与控制领域的杰出成就以及对学会和IEEE长期的贡献。

IEEE Systems, Man, and Cybernetics Society established this award in 1991 to commend scholars who have rendered outstanding professional service or contributions to systems engineering concepts, methods, designs, education or management. C. L. Philip Chen is not only the first scholar in China to receive this award, but also one of the few scholars to win the Norbert Wiener Award, a prestigious award which is regarded as the highest honor in IEEE control.

IEEE系统、人机与控制理论协会于1991年设立这一奖项，旨在表彰在系统工程概念、方法、设计、教育或管理方面作出杰出专业服务或贡献的学者。陈俊龙不仅是中国首位获此殊荣的学者，也是为数不多的同时获得另一重磅奖项、被视为IEEE控制学领域最高荣誉的Norbert Wiener Award（诺伯特·维纳奖）的学者。



5. SCUT was Invited to Attend the World Alliance of Universities on Carbon Neutrality as Founding Member

碳中和世界大学联盟成立 华南理工为创始高校

On October 27, the inaugural meeting of the World Alliance of Universities on Carbon Neutrality was held in Nanjing. As a founding member, SCUT was invited to the inaugural meeting of the alliance in view of its research and innovation achievements in carbon neutrality.

10月27日，碳中和世界大学联盟成立大会在南京举行。鉴于在碳中和相关领域的研究积累与创新成果，华南理工大学作为创盟成员，受邀参加联盟成立大会。

The establishment of World Alliance of Universities on Carbon Neutrality was jointly initiated by Southeast University and the University of Birmingham. Its founding members include more than ten "double first-class" universities, as well as a number of world-renowned universities such as the University of Birmingham.

碳中和世界大学联盟由东南大学和伯明翰大学共同发起成立，联盟创始成员包含了10余所“双一流”建设高校，以及英国伯明翰大学等一批世界知名高校。

World Alliance of Universities on Carbon Neutrality is the first global alliance of universities in the world to focus on talent cultivation and scientific research cooperation in carbon neutral technologies. The alliance will focus on the following: talent cultivation; scientific research cooperation and achievement transformation in carbon neutral technologies; promotion of cooperation and communication between world-class universities and academic institutions; active strengthening of international cooperation on climate change; training of top talents with international vision and innovation ability for low-carbon development of the global society; the realization of dual carbon goals at both national and local levels; providing world-leading technological innovation support. The inaugural meeting was organized by Southeast University and held both online and offline. The alliance plans to hold a variety of activities such as an international carbon neutral knowledge contest for university students, international academic conference on carbon neutrality, joint training of high-level talents, and achievement transformation and recommendation exhibition.

碳中和世界大学联盟是全球首个聚焦碳中和技术领域人才培养和科研合作的世界大学联盟。联盟将聚焦碳中和技术领域人才培养、科研合作与成果转化，推进世界一流大学和学术机构间的合作交流，主动加强应对气候变化国际合作，为全球社会低碳发展，国家和地方实现双碳目标培养拥有国际视野和创新能力的拔尖人才，提供全球领先的技术创新支持。本次联盟成立大会由东南大学承办，以线上和线下两种方式开展。联盟计划举办国际大学生碳中和知识竞赛、碳中和主题国际学术会议、高层次人才联合培养、成果转化推荐展等多种活动。



6. Prof. Yuguang Ma, Alumnus Zhengyi Fu and Alumnus Shuangfei Wang Were Elected Academicians

华南理工马於光教授、傅正义校友、王双飞校友当选院士

On November 18, the Chinese Academy of Sciences and Chinese Academy of Engineering announced the list of newly elected academicians in 2021. Among them, Prof. Yuguang Ma was elected academician of the Chinese Academy of Sciences, and alumnus Zhengyi Fu and Shuangfei Wang were elected academicians of Chinese Academy of Engineering.

11月18日，中国科学院、中国工程院公布了2021年新当选的中国科学院院士和中国工程院院士名单。其中，华南理工大学马於光教授当选中国科学院院士，傅正义校友、王双飞校友当选中国工程院院士。

Academician Yuguang Ma is engaged in the fundamental scientific research on organic/polymer optoelectronic materials. With his research achievements, he has made important contributions to the development of the second-generation phosphorescent and the new-generation of low-cost pure organic electroluminescent materials. He won the second prize of the National Natural Science Award and the first prize of the Natural Science Award for Outstanding Scientific and Technological Achievements of the Ministry of Education.

马於光院士从事有机/高分子光电材料基础科学问题研究，研究成果对推动第二代磷光及新一代廉价纯有机电致发光材料发展具有重要贡献。曾获得国家自然科学奖二等奖、教育部优秀科技成果奖自然科学一等奖等奖项。

Academician Zhengyi Fu was admitted to SCUT for a bachelor program of cementitious materials in 1980 and for a master program of inorganic nonmetallic materials in 1984. He is one of the early pioneers of combustion synthesis research in China, and has developed a number of materials synthesis and preparation equipment with independent intellectual property rights. In addition, he established an internationally advanced material preparation technology platform.

傅正义院士为华南理工大学胶凝材料专业1980级本科和无机非金属材料专业1984级硕士校友，他是国内早期开拓燃烧合成研究的学者之一，研制和开发了多台具有自主知识产权的材料合成与制备装备，建立起了具有国际先进水平的材料制备技术平台。

Academician Shuangfei Wang was admitted to SCUT for a PhD program of pulp and paper engineering in 1992. He is committed to the application of basic research, key technology development and industrial application of clean paper production and end treatment. He has made a series of important achievements in clean pulp bleaching and clean waste paper pulping and has made important contributions to the sustainable development of China's paper industry.

王双飞院士为华南理工大学1992级制浆造纸工程博士校友，其致力于造纸清洁生产与末端治理的应用基础研究、关键技术开发及产业化应用，在纸浆清洁漂白与废纸清洁制浆领域取得了一系列重要成果，为保障我国造纸行业可持续发展做出了重要贡献。



7. Prof. Wenquan Che and Prof. Xiuyin Zhang were Elected as 2022 IEEE Fellows

华南理工车文荃教授、章秀银教授当选2022年IEEE Fellow

On November 23, the Institute of Electrical and Electronics Engineers (IEEE) announced the list of its 2022 fellows. Prof. Wenquan Che and Prof. Xiuyin Zhang of the School of Electronic and Information Engineering were on the list.

11月23日，IEEE(国际电气与电子工程师协会)公布2022年Fellow名单，其中电子与信息学院车文荃教授、章秀银教授当选。

IEEE is a well-known non-profit multinational academic organization in the areas of electronics,

electrical engineering, computers, communication and automation engineering. It has about 420,000 members and 39 professional chapters in more than 160 countries and regions. IEEE Fellow is the highest-level member of the society and the highest honor bestowed by the organization. It is recognized as an authoritative honor and important professional achievement in the academic science and technology community. IEEE Fellows are selected annually by peer experts among members who have made outstanding contributions to their field. The number of elected members does not exceed 0.1% of the total number of IEEE members. Selected scientists are generally regarded as outstanding scientists who have made significant achievements in science and engineering.

IEEE是电子、电气、计算机、通信、自动化工程技术研究领域著名的非营利性跨国学术组织，在160多个国家和地区拥有约42万会员和39个专业分会。IEEE Fellow为学会最高等级会员，是该组织授予的最高荣誉，在学术科技界被认定为权威的荣誉和重要的职业成就，每年由同行专家在做出突出贡献的会员中评选，当选人数不超过IEEE会员总人数的0.1%，当选科学家一般被视作在科学与工程领域内取得重要成就的杰出科学家。

8. SCUT Had Two Top Students Training Program in Basic Disciplines Bases 2.0

华南理工获批2个基础学科拔尖计划2.0基地

On November 29, the Ministry of Education issued the list of 2021 top students training program in basic disciplines base 2.0, SCUT has two bases listed in terms of chemistry and computer science. This marks the official entry of SCUT into the national team of training top talents in basic disciplines.

11月29日，教育部发文公布2021年度基础学科拔尖学生培养计划2.0基地名单，其中华南理工大学共有化学、计算机科学两个拔尖学生培养基地入选，标志着华工正式进入基础学科拔尖人才培养的“国家队”。

List of 2021 top students training program in basic disciplines base 2.0

华南理工大学入选基础学科拔尖学生培养计划2.0基地名单

No. 序号	Discipline 类别	Name 基地名称
1	Chemistry 化学	The top chemistry students training base 化学拔尖学生培养基地
2	Computer Science 计算机科学	The top computer science students training base 计算机科学拔尖学生培养基地

The Top Students Training Program is a talent cultivation program launched by China in 2009. It aims to cultivate China's own academic masters. After ten years of pilot exploration, six government departments, including the Ministry of Education, the Ministry of Science and Technology and the Ministry of Finance, launched the Top Students Training Program 2.0 in 2018. In 2019, the top students training program in basic disciplines base was established.

“拔尖计划”是中国在2009年推出的一项人才培养计划，旨在培养中国自己的学术大师。经过十年试点探索，教育部、科技部、财政部等六部门于2018年启动实施“拔尖计划”2.0，并在2019年启动基础学科拔尖学生培养基地建设。

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