2025年丝绸之路大学联盟化工子联盟会议暨绿色化学和可持续催化国际学术交流会

2025 Conference of Chemical Engineering Sub-Alliance of the University Alliance of the Silk Road & International Academic Symposium on Green Chemistry and Sustainable Catalysis (CESA-UASR & IASGS 2025)

会议手册

中国·新疆·石河子

2025年8月11日-14日

会议组织

1.主办单位：　　石河子大学、西安交通大学

2.承办单位：　　石河子大学化学化工学院

西安交通大学化学工程与技术学院

化工绿色过程兵团重点实验室

氟氮化工新材料全国重点实验室

西部地区化学工程与工艺专业虚拟教研室

3.协办单位：　　新疆工程热化学学会

新疆化学学会

新疆石油与化学工业协会

中国化工学会硅能源与化工专委会

兵团环保产业协会固废处理与资源化利用专委会

4.大会主席：　　刘纪昌 石河子大学

杨贵东 西安交通大学

5.秘 书 长：　　刘　平 石河子大学

李鹏飞 西安交通大学

温馨提示：

请各位参会代表扫描二维码加入：“2025化工子联盟暨绿色化学国际会议群”

目　录

一、会务安排

I. Conference Arrangements

一、会议时间

2025年8月11日-14日

二、报到、注册

时　间：2025年8月11日下午

地　点：一带一路国际教育中心（简称：国际教育中心）

三、会议地点

国际教育中心201会议室、石河子大学化工创新楼203会议室

四、交通与接送站

8月11日在乌鲁木齐天山国际机场、石河子花园机场安排接站服务。

五、会务组联系人

刘　平：18997730223（总负责）

于　锋：18139267109（青年论坛）

李洪玲：15026236966（虚拟教研室会议）

张海洋：15109939193（会务）

吴春林：18899530278（会场）

唐　娜：13602171248（车辆调度）

何　静：15699328766（餐饮、住宿）

六、温馨提示

1．请参会专家和工作人员佩戴参会证进入会场、餐厅等场所。

2．会议期间请自觉遵守会场纪律，手机调成振动或静音状态。

二、会议日程

II. Agenda of the Symposium

日　期 Date	时　间 Time	内　容 Content	地　点 Venue
8月11日 下午 August 11 (Afternoon)	12:00-22:00	报　到 Registration	国际教育中心大厅 Hall of the International Education Center
	20:00-22:00	晚　餐 Dinner	国际教育中心餐厅 Restaurant of the International Education Center
8月12日 上午 August 12 (Morning)	9:30-9:50	开幕式 Opening Ceremony	国际教育中心201会议室 Meeting Room 201 of the International Education Center
	9:50-10:00	合　影 Group Photo	
	10:00-12:00	大会报告 Plenary Speech	
	12:00-12:20	茶　歇 Tea Break	
	12:20-13:50	大会报告 Plenary Speech	
	13:45-15:00	工作餐 Working Lunch	国际教育中心餐厅 Restaurant of the International Education Center
8月12日 下午 August 12 (Afternoon)	15:45	乘车（国际教育中心门口，仅参加青年论坛的专家） Shuttle Bus Pick-up (International Education Center Gate, exclusively for Youth Forum participants)	
	16:00-17:40	主题报告 Keynote Speech	分会场一：国际教育中心201会议室 Venue 1: Meeting Room 201 of the International Education Center
	17:40-18:00	茶　歇 Tea Break	
	18:00-19:40	主题报告 Keynote Speech	
	16:00-18:00	主题报告 Keynote Speech	分会场二（青年论坛）：化工创新楼203会议室

	18:00-18:15	茶　歇 Tea Break	Venue 2 (Youth Forum): Room 203, Chemical Innovation Building
	18:15-19:45	主题报告 Keynote Speech	
	19:50	乘车（化工创新楼门口，仅参加青年论坛的专家） Shuttle Bus Pick-up (Gate of Chemical Innovation Building, exclusively for Youth Forum participants)	
	20:00-22:00	晚　餐 Dinner	亚克西宴会厅（内场） Yakexi Banquet Hall (Internal Venue)
	9:15	乘车（国际教育中心门口，仅参加青年论坛的专家） Shuttle Bus Pick-up (International Education Center Gate, exclusively for Youth Forum participants)	
8月13日 上午 August 13 (Morning)	9:30-11:10	主题报告 Keynote Speech	分会场一：国际教育中心201会议室 Venue 1: Meeting Room 201 of the International Education Center
	11:10-11:30	茶歇 Tea Break	
	11:30-13:30	主题报告 Keynote Speech	
	9:30-11:15	主题报告 Keynote Speech	分会场二（青年论坛）：化工创新楼203会议室 Venue 2 (Youth Forum): Room 203, Chemical Innovation Building
	11:15-11:30	茶　歇 Tea Break	
	11:30-14:00	主题报告 Keynote Speech	
	14:00	乘车（化工创新楼门口，仅参加青年论坛的专家） Shuttle Bus Pick-up (Gate of Chemical Innovation Building, exclusively for Youth Forum participants)	
	14:00-15:00	工作餐 Working Lunch	国际教育中心餐厅 Restaurant of the International Education Center
8月13日 下午 August 13 (Afternoon)	16:30-18:00	参观军垦博物馆 Visit to the Museum of Military Reclamation of the XPCC	军垦博物馆 Museum of Military Reclamation of the XPCC

	19:30-22:00	晚　餐 Dinner	国际教育中心餐厅 Restaurant of the International Education Center
8月14日 上午 August 14 (Morning)	10:00-14:00	离会 Departure	

开 幕 式
Opening Ceremony

时间：8月12日上午

Time: August 12 (Morning)

地点：国际教育中心201会议室

Venue: Meeting Room 201 of the International Education Center

主持人：贾鑫 Host: Xin Jia	
时 间 Time	**内容 Content**
9:30-9:35	介绍来宾 Guest Introduction
9:35-9:40	石河子大学校领导致辞 Opening Speech by Leader of Shihezi University ……
9:40-9:45	化学化工学院刘纪昌院长致辞 Speech by Dean of School of Chemistry and Chemical Engineering Jichang Liu
9:45-9:50	……致辞 Speech by ……
9:50-10:00	合 影 Group Photo

大会报告 / Plenary Speech

时间 ：8月12日上午 / Time: August 12 (Morning)

地点：国际教育中心201会议室 / Venue: Meeting Room 201 of the International Education Center

时间 Time	报告人 Speaker	单 位 Organization	题 目 Title
主持人：刘纪昌 Host: Jichang Liu			
10:00 - 10:30	朱晓夏 Xiaoxia Zhu	北京师范大学 （珠海校区） Beijing Normal University (Zhuhai Campus)	绿色化学方法制备聚合物生物材料 Green Chemistry Approaches in Making Polymeric Biomaterials
10:30 - 11:00	黄国维 Kuo-Wei Huang	阿卜杜拉国王科技大学 King Abdullah University of Science and Technology	赋能未来：甲酸作为低碳能源载体 Fueling the Future: Formic Acid as a Low-carbon Energy Carrier
11:00 - 11:30	伊沙克·艾哈迈德 Ishak Ahmad	马来西亚国立大学 University Kembangan Malaysia	纤维素纳米晶（CNC）增强生物纳米复合材料的可持续应用进展 Advancing Sustainable Applications of cellulose nanocrystals (CNC)-Reinforced Bio-Nanocomposites
11:30 - 12:00	马尼亚欣·阿尔乔姆 Manyakhin Artem	俄罗斯科学院远东分院 Far Eastern Branch of the Russian Academy of Sciences	槐米中芦丁与槲皮素的绿色提取技术：方法及效率研究 Eco-Friendly Extraction of Rutin and Quercetin from Sophora japonica: Technological Approach and Efficiency
12:00 - 12:20	茶歇 Tea Break		

主持人：于锋 Host: Feng Yu			
12:20 - 12:50	戴伟民 Weimin Dai	香港科技大学 The Hong Kong University of Science and Technology	绿色氧钯化用于合成双四氢呋喃骨架及其机理和立体选择性研究 Green Oxy-palladation for the Synthesis of Bis-Tetrahydrofuran Frameworks: Mechanism and Stereoselectivity Study
12:50 - 13:10	傅梓国 Poh Chee Kok	新加坡科技研究局 Agency for Science, Technology and Research (A*STAR)	CO_2增值转化为烯烃与可持续航空燃料的催化剂开发 Catalyst development for CO_2 valorization to olefins and sustainable aviation fuel
13:10 - 13:30	张丽莉 Lili Zhang	新加坡科技研究局 Agency for Science, Technology and Research (A*STAR)	可持续化学品与能源生产的多功能材料 Multifunctional Materials for Sustainable Chemicals and Energy production
13:30 - 13:50	布伦达·塞西莉亚·阿尔坎塔尔·巴斯克斯 Brenda Cecilia Alcántar Vázquez	墨西哥国立自治大学 Instituto de Ingeniería, UNAM	工业废料中的二氧化碳吸附剂 CO_2 sorbents from industrial waste

分会场一：主题报告 / Keynote Speech

时间：8月12日下午 / Time: August 12 (Afternoon)

地点：国际教育中心201会议室 / Venue: Meeting Room 201 of the International Education Center

时间 Time	报告人 Speaker	单 位 Organization	题 目 Title
主持人：贾鑫 Host: Xin Jia			
16:00 - 16:20	邝福儿 Fuk Yee KWONG	香港中文大学 The Chinese University of Hong Kong	用于立体拥挤的交叉偶联过程的位阻可调型膦配体 Steric-on-Demand Phosphine Ligands for Tackling Highly Steric-Congested Cross-Coupling Processes
16:20 - 16:40	克日什托夫·库钦斯基 Krzysztof Kuciński	波兹南亚当·密茨凯维奇大学 Adam Mickiewicz University in Poznan	多种硅烷化策略：从脱氢偶联到脱炔偶联的探索 Several Silylation Strategies: A Journey from Dehydrogenative to Dealkynative Coupling
16:40 - 17:00	童荣标 Rongbiao Tong	香港科技大学 The Hong Kong University of Science and Technology	模拟卤素过氧酶在有机合成中的绿色氧化 Mimicking Haloperoxidase for Green Oxidations in Organic Synthesis
17:00 - 17:20	赛玛·佩尔文 Saima Perveen	西安交通大学 Xi'an Jiaotong University	手性吡啶配体：面向多样化不对称催化 Chiral Pyridine Ligands for Diverse Asymmetric Catalysis
17:20 - 17:40	克雷格·戴 Craig Day	哥本哈根大学 University of Copenhagen	多吡啶镍配合物电子转移机制的光谱解析 Elucidating Electron Transfer Events in Polypyridine Nickel Complexes
17:40 - 18:00	茶歇 Tea Break		

主持人：杨贵东 Host: Guidong Yang			
18:00 - 18:20	周继升 Jisheng Zhou	塔里木大学/北京化工大学 Tarim University / Beijing University of Chemical Technology	钠金属电池负极功能化碳材料集流体设计 Design of Functionalized Carbon Material Current Collectors for Sodium Metal Battery Anodes
18:20 - 18:40	劳尔·D·罗德里格斯 Raul D. Rodriguez	托木斯克理工大学 Tomsk Polytechnic University	光热、光化学，还是光偶极？—光驱动纳米催化机制的解析 Photothermal, Photochemical, or Photo-dipole? Elucidating the Mechanisms of Light-Driven Nanocatalysis
18:40 - 19:00	叶夫根尼娅·舍列梅特 Evgeniya Sheremet	托木斯克理工大学 Tomsk Polytechnic University	面向传感与催化应用的二维材料工程 Engineering 2D materials for sensing and catalysis
19:00 - 19:20	贾永光 Yongguang Jia	北京师范大学 Beijing Normal University	天然分子滑环组装与水凝胶弹性体 Natural Molecular Slippery Ring Assembly and Hydrogel Elastomers
19:20 - 19:40	张猛 Meng Zhang	北京师范大学 Beijing Normal University	基于胆汁酸的分子水凝胶及二氧化碳吸附 Bile Acid-Based Molecular Hydrogels for Carbon Dioxide Capture

分会场二：主题报告 / Keynote Speech

时间：8月12日下午 / Time: August 12 (Afternoon)

地点：化工创新楼203报告厅 / Venue: Lecture Hall 203, Chemical Innovation Building

时间 Time	报告人 Speaker	单 位 Organization	题 目 Title
主持人：XXX Host: XXX			
16:00 - 16:15	扎伊尔·泰罗维奇·伊布拉吉莫夫 Zair Tairovich Ibragimov	哈萨克国立阿里-法拉比大学 Al-Farabi Kazakh National University	基于绿色化学原理的哈萨克斯坦植物原料、矿物原料及工业废弃物环保处理技术开发 Creation of environmentally friendly technologies for processing plant, mineral raw materials and man-made waste in Kazakhstan based on the principles of green chemistry
16:15 - 16:30	贝尔加纳耶娃·古尔扎特 Berganayeva Gulzat	哈萨克国立阿里-法拉比大学 Al-Farabi Kazakh National University	基于哈萨克斯坦药用植物提取物的绿色合成纳米银及其生物活性研究 Green synthesis of silver nanoparticles using selected extracts of medicinal plants from Kazakhstan and investigation of their biological activity
16:30 - 17:45	马志远 Zhiyuan Ma	东华大学 Donghua University	光敏自催化糖聚物光敏剂构筑及其靶向PDT性能 Construction of Photosensitive Self-Catalytic Glycopolymer Photosensitizers and Their Targeted PDT Performance
17:45 - 18:00	王瑞莉 Ruili Wang	东华大学 Donghua University	植物源桦木醇抗菌单体结构设计及其牙科复合树脂性能研究 Structural Design of Plant-Derived Betulin Antimicrobial Monomers and Their Performance in Dental Composite Resins
18:00 - 18:15	茶歇 Tea Break		
主持人：XXX Host: XXX			

18:15 - 18:30	巴赫特詹·叶尔丹 Bakhytzhan Yeldana	哈萨克国立阿里-法拉比大学 Al-Farabi Kazakh National University	基于邻甲氧基苯胺的新型涂层的腐蚀研究 Corrosion studies on some novel coatings based on o-anisidine
18:30 - 18:45	阿鲁占·克涅索娃 Aruzhan Kenessova	哈萨克国立阿里-法拉比大学 Al-Farabi Kazakh National University	石油渣油与废油共处理热加工过程：焦化产物的收率与表征分析 Thermal Co-Processing of Petroleum Residues and Waste Oils: Yield and Characterization of Coking Products
18:45 - 19:00	穆赫塔尔·叶列乌夫 Mukhtar Yeleuov	萨特巴耶夫国立技术大学 Satbayev National Technical University	混合型电化学储能器件用电极级碳材料与过渡金属氧化物材料 Electrode grade carbon and transition metal oxide materials for hybrid electrochemical energy storage devices
19:00 - 19:15	钱　安 An Qian	华东理工大学 East China University of Science and Technology	g-C_3N_4基底上界面工程调控的二维PdX双金属烯高效析氢研究 Interface-Engineered 2D PdX bimetallene on g-C_3N_4 for Efficient Hydrogen Evolution
19:15 - 19:30	马玉玲 Yuling Ma	华东理工大学 East China University of Science and Technology	调控铁基催化剂上C1中间体转化实现CO_2选择性加氢制乙醇 Modulating C1 Intermediates Conversion on Fe-based Catalysts for Selective Hydrogenation of CO_2 to Ethanol
19:30 - 19:45	罗玉萍	石河子大学 Shihezi University	苯炔、S-甲基-d3硫代磺酸酯与酰胺的三组分反应构建三氘代甲基化的硫亚胺 Trideuteromethylthiolation through Reaction of Arynes, S- Methyl- d3 Sulfonothioate with Sulfonamides or Amides: Access to Trideuteromethylated Sulfilimines

分会场一：主题报告 / Keynote Speech

时间：8月13日上午 / Time: August 13 (Morning)

地点：国际教育中心201会议室 / Venue: Meeting Room 201 of the International Education Center

时间 Time	报告人 Speaker	单 位 Organization	题 目 Title
主持人：** Host: ***			
9:30 - 9:50	肖天存 Tiancun Xiao	牛津大学 University of Oxford	一步法CO_2转化航空燃料催化剂 Catalyst for Converting CO_2 into Aviation Fuel by 1-Step Process
9:50 - 10:10	于海 Hai Yu	澳大利亚联邦科学与工业研究组织 Common wealth Scientific and Industrial Research Organisation, Australia	可持续碳矿化的集成式碳捕集与利用技术 Integrated carbon capture and utilization for Sustainable carbon mining
10:10 - 10:30	王考进 Kaojin Wang	北京师范大学 Beijing Normal University	形状记忆高分子及其发光行为 Shape-Memory Polymers and Their Luminescent Behaviors
10:30 - 10:50	王周君 Zhoujun Wang	宁夏大学/北京化工大学 Ningxia University / Beijing University of Chemical Technology	温室气体催化转化：从热催化到光热耦合强化 Catalytic Conversion of Greenhouse Gases: From Thermal Catalysis to Photothermal Coupling Enhancement
10:50 - 11:10	郭勇 Yong Guo	石河子大学/华东理工大学 Shihezi University / East China University of Science and Technology	基于原位制氢与加氢脱氧耦合技术的生物质酚类化合物制备 Phenolics Production from biomass via Coupling in-situ Hydrogen Generation and Hydrodeoxygenation
11:10 - 11:30	茶歇 Tea Break		

主持人：***** Host: *****			
11:30 - 11:50	王东亮 Dongliang Wang	兰州理工大学 Lanzhou University of Technology	基于脱硫剂溶液设计与过程优化耦合的多尺度SO_2捕集性能调控研究 Research on Multiscale Regulation of SO_2 Capture Performance Based on Coupling of Desulfurizer Solution Design and Process Optimization
11:50 - 12:10	阿杰马勒·汗 Ajmal Khan	西安交通大学 Xi'an Jiaotong University	第6族金属催化的可持续绿色合成 Group 6 metal-catalyzed sustainable and green synthesis
12:10 - 12:30	武占省 Zhansheng Wu	西安工程大学 Xi'an Polytechnic University	基于MOF固定化酶催化转化稀有人参皂苷研究 Study on Catalytic Conversion of Rare Ginsenosides Based on MOF-Immobilized Enzymes
12:30 - 12:50	张千华 Chong Chien Hwa	诺丁汉大学马来西亚分校 University of Nottingham Malaysia	用于废水处理的创新型3D打印吸附剂 Innovative 3D-printed Adsorbent for Wastewater Treatment
12:50 - 13:10	舒程勇 Chengyong Shu	西安交通大学 Xi'an Jiaotong University	燃料电池催化剂的多尺度结构调控与性能增强策略 Multiscale Structural Regulation and Performance Enhancement Strategies for Fuel Cell Catalysts
13:10 - 13:30			

分会场二：主题报告 / Keynote Speech

时间：8月13日上午 / Time: August 13 (Morning)

地点：化工创新楼203报告厅 / Venue: Lecture Hall 203, Chemical Innovation Building

时间 Time	报告人 Speaker	单 位 Organization	题 目 Title
主持人：** Host: ***			
9:30 - 9:45	阿齐莫夫·阿卜杜加尼·穆塔洛维奇 Azimov Abdugani Mutalovich	南哈萨克斯坦M.奥埃佐夫大学 M. Auezov South Kazakhstan University	超吸水性聚合物水凝胶的合成及其在水资源管理中的应用研究 Study of synthesis and application of superabsorbent polymer hydrogels for water resource management
9:45 - 10:00	斯迈洛夫·巴基特 Smailov Bakyt	南哈萨克斯坦M.奥埃佐夫大学 M. Auezov South Kazakhstan University	工业废弃物基改性聚合物的合成及其多功能应用 Synthesis of modified polymers from industrial waste for multifunctional use
10:00 - 10:15	莫米诺娃·萨乌列 Mominova Saule	南哈萨克斯坦M.奥埃佐夫大学 M. Auezov South Kazakhstan University	硅灰石改性泡沫混凝土再利用热电厂废弃物的挑战 The challenges of reusing thermal power plant wastes to produce cellular concrete modified with wollastonite
10:15 - 10:30	李雪琴 Xueqin Li	石河子大学 Shihezi University	碳捕集技术的创新突破与工程示范 Innovation Breakthroughs and Engineering Demonstration of Carbon Capture Technology
10:30 - 10:45	包福喜 Fuxi Bao	石河子大学 Shihezi University	解锁安培级电流密度下的碱性水分解：氧化路径机制的作用 Unlocking Alkaline Water Splitting at Ampere-Level Current Densities: The Role of Oxidation Pathway Mechanism
10:45 - 10:55	刘琨 Kun Liu	石河子大学 Shihezi University	智能监测驱动的新疆牛粪好氧发酵工艺优化及循环利用研究 Research on the optimization and recycling of aerobic fermentation process of cow manure driven by intelligent monitoringin Xinjiang

10:55 - 11:05	王兴翔 Xingxiang Wang	石河子大学 Shihezi University	棉秆与农业残膜催化共热解制备芳香烃的研究 Valorization of Cotton Stalk and LDPE into Aromatic Hydrocarbons through Catalytic Co-pyrolysis
11:05 - 11:15	孙亚鑫 Yaxin Sun	石河子大学 Shihezi University	过渡金属基MOF材料的制备及其电化学性能研究 Preparation and Electrochemical Performance Study of Transition Metal-based MOF Materials
11:15 - 11:30	茶歇 Tea Break		
主持人：***** Host: *****			
11:30 - 11:45	阿西尔别科夫·巴基特让 Assilbekov Bakytzhan	南哈萨克斯坦M.奥埃佐夫大学 M. Auezov South Kazakhstan University	活性炭吸附CO_2的实验与数值模拟研究：吸附床厚度的影响 Experimental and numerical study of CO_2 adsorption onto activated carbon: adsorbent bed thickness effect
11:45 - 12:00	雷纳特·别伊谢诺夫 Renat Beissenov	哈萨克-英国技术大学 Kazakh-British Technical University	面向清洁能源应用的功能性氧化物纳米材料光催化剂制备 Fabrication of functional oxide nanomaterials based photocatalists for clean energy application
12:00 - 12:10	杨振 Zhen Yang	石河子大学 Shihezi University	轴向纳米颗粒的晶面工程调控Fe-N-C的微环境 Facet engineering of axial nanoparticles regulates the microenvironment of Fe-N-C
12:10 - 12:20	崔丹 Dan Cui	石河子大学 Shihezi University	一种新型非贵金属负载型催化剂（$CuO–Fe_2O_3/TiO_2$）用于氢气选择性催化还原 NO Unravelling a new non-noble metal supported catalyst ($CuO-Fe_2O_3/TiO_2$) for NO selective catalytic reduction with H_2
12:20 - 12:30	李程程 Chengcheng Li	石河子大学 Shihezi University	通过形貌-缺陷工程构建Ru-RuO_2异质结构用于工业级电流密度下pH通用性析氢反应 Constructing Ru-RuO_2 heterostructure via synergistic morphology-defect engineering for pH-universal HER at industrial-grade current density

12:30 - 12:40	杨硕 Shuo Yang	石河子大学 Shihezi University	在基于过氧一硫酸盐的高级氧化过程中探究氨基相对于碳材料的初始活性 Investigating the original activity of amino group over carbon in peroxymonosulfate-based advanced oxidation processes
12:40 - 12:50	周永博 Yongbo Zhou	石河子大学 Shihezi University	“动态配位”的过渡金属配合物在CO_2转化中的应用 The Application of “Dynamic Coordination” for Transition Metal Complexes in CO_2 Conversion
12:50 - 13:00	吕晓雄 Xiaoxiong Lv	石河子大学 Shihezi University	泛内酯的有机不对称合成 Organic asymmetric synthesis of panlactones
13:00 - 13:10	吴培涵 Peihan Wu	石河子大学 Shihezi University	恶臭假单胞菌中混合糖代谢途径的构建及香草酸的生产 Engineering mixed sugar metabolic channels in Pseudomonas putida to produce vanillic acid
13:10 - 13:20	张潇予 Xiaoyu Zhang	石河子大学 Shihezi University	自组装的微藻光敏生物杂交体，使太阳能驱动的马拉硫磷定向转化为磷酸盐 Self-assembled microalgae-photosensitized biohybrids enabling solar-driven directed phosphate conversion form malathion
13:20 - 13:30	毛旭冉 Xuran Mao	石河子大学 Shihezi University	钼的动态演化应用于高效电催化硝酸盐还原合成氨 Dynamic evolution of molybdenum for efficient electrocatalytic nitrate reduction to ammonia
13:30 - 13:40	龙鹏飞 Pengfei Long	石河子大学 Shihezi University	内建电场驱动的协同吸附加速质子转移，实现高效的生物质电氧化 Electric-Field-Driven Synergistic Adsorption Accelerates Proton Transfer for Efficient Biomass Electrooxidation
13:40 - 13:50	肖金凤 Jinfeng Xiao	石河子大学 Shihezi University	石河子市主城区大气颗粒物中碘的分布及其潜在来源 Distribution and potential sources of iodine in atmospheric particulate matter in the main urban area of Shihezi
13:50 - 14:00	李雄 Xiong Li	石河子大学 Shihezi University	$Cd_xZn_{1-x}S$孪晶晶界中的界面极化场增强效应促进光催化CO_2还原 $Cd_xZn_{1-x}S$ Enhancement of interfacial polarization field in twin grain boundaries promotes photocatalytic

			CO_2 reduction
	魏奋 Fen Wei	石河子大学 Shihezi University	多功能中空二氧化锰纳米递送系统实现肿瘤协同催化治疗 Multifunctional Hollow MnO_2 Nanodelivery System for Synergistic Catalytic Therapy of Tumors
	刘浩 Hao Liu	石河子大学 Shihezi University	优化超薄多孔氮化碳载流子动力学用于光催化农药去除 Optimizing the carrier dynamics of ultra-thin porous nitrogen doped carbon for photocatalytic pesticide removal
	任豪毅 Haoyi Ren	石河子大学 Shihezi University	准固态电化学发光免疫传感器的构建及其用于肿瘤标志物的检测 Construction of Quasi-Solid-State Electrochemiluminescent Immunosensor and Its Application in the Detection of Tumor Markers
	蒋雯雯	石河子大学 Shihezi University	基于联吡啶钌的增强型电致化学发光免疫传感：提升癌症生物标志物检测的策略 Enhanced Electrochemiluminescence Immunosensing with $Ru(bpy)_3^{2+}$: Strategies for Improved Cancer Biomarker Detection
	张启超	石河子大学 Shihezi University	Brønsted碱催化β-芳基乙烯基磺酰氟参与的串联环加成反应研究 Brønsted Base-catalyzed tandem cycloaddition studies involving β-arylvinylsulfonyl fluorides
	刘翠翠	石河子大学 Shihezi University	芳炔促进的硫代酰胺脱硫：生成腈和二芳基硫化物 Arynes Promoted Dehydrosulfurization of Thioamides: Access to Nitriles and Diaryl Sulfides

参会人员信息

序号	姓名	机构	职务、职称
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2	Kuo-Wei Huang	King Abdullah University of Science and Technology	Professor
3	Raul D. Rodriguez	Tomsk Polytechnic University	Professor
4	Evgeniya Sheremet	Tomsk Polytechnic University	Professor
5	Brenda Cecilia Alcántar Vázquez	Instituto de Ingeniería, UNAM	Researcher
6	Craig Day	University of Copenhagen	Associate Professor
7	Zhang Lili	Agency for Science, Technology and Research (A*STAR)	Division Director/Dr.
8	Poh Chee Kok	Agency for Science, Technology and Research (A*STAR)	Deputy Division Director/Dr.
9	Krzysztof Kuciński	Adam Mickiewicz University in Poznan	Associate Professor
10	ChongChien Hwa	University of Nottingham Malaysia	Associate Professor
11	Zair Tairovich Ibragimov	Al-Farabi Kazakh National University	Reseacher
12	Bakhytzhan Yeldana	Al-Farabi Kazakh National University	Reseacher
13	Berganayeva Gulzat	Al-Farabi Kazakh National University	Associate Professor
14	Aruzhan Kenessova	Al-Farabi Kazakh National University	PhD student
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16	Mominova Saule	M. Auezov South Kazakhstan University	Senior Lecturer, PhD
17	Azimov Abdugani Mutalovich	M. Auezov South Kazakhstan University	Chief researcher at a Laboratory of “Innovative Water Purification Systems”, PhD
18	Smailov Bakyt	M. Auezov South Kazakhstan University	Head of department of commercialization and entrepreneurship, PhD
19	Assilbekov Bakytzhan	M. Auezov South Kazakhstan University	Head of Science Department, PhD
20	Renat Beissenov	Kazakh-British Technical University	Associate professor, Dean, The school of chemical Engineering

21	Mukhtar Yeleuov	Satbayev National Technical University	Dr.Senior Reseacher
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23	Hai Yu	Common wealth Scientific and Industrial Research Organisation, Australia	Principal Research Scientist and Project Leader
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25	童荣标	香港科技大学	教授
26	邝福儿	香港中文大学	教授
27	朱晓夏	北京师范大学（珠海校区）	教授
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55	马玉玲	华东理工大学	博士研究生
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65	李程程	石河子大学	博士/硕士研究生
66	杨硕	石河子大学	博士/硕士研究生
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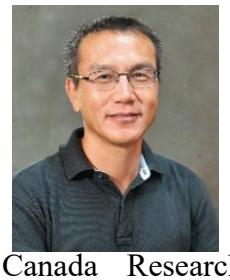
76	刘浩	石河子大学	博士/硕士研究生
77	任豪毅	石河子大学	博士/硕士研究生
78	蒋雯雯	石河子大学	博士/硕士研究生
79	张启超	石河子大学	博士/硕士研究生
80	刘翠翠	石河子大学	博士/硕士研究生
81	罗玉萍	石河子大学	博士/硕士研究生

三、报告人简介
III. Speakers' Biographies

Report Title: Green Chemistry Approaches in Making Polymeric Biomaterials

Presenter: Xiao-Xia Zhu



Biography: Xiao-Xia Zhu is a professor of chemistry at Beijing Normal University at Zhuhai. His primary interests focus on the use of natural compounds for the preparation of new polymers for biomedical and pharmaceutical applications, including degradable polymers, hydrogels, drug delivery systems and dental composites. He is a co-author of over 300 scientific publications and several patents. He was a professor at University of Montreal and held the Canada Research Chair in Polymeric Biomaterials. He also received the Macromolecular Science and Engineering Award from the Chemical Institute of Canada.

Abstract: Green chemistry methods are especially useful in the preparation of polymers intended for biomedical applications. We have used natural compounds such as bile acids, porphyrin and carbohydrates in the preparation of various polymers intended for biomedical applications. We have also used enzymes as catalystes in the synthesis of degradable polyesters and for the conversion of carbohydrate pendants on glycopolymers into acid groups after the introduction of a poly(ethylene glycol) (PEG) spacers. Some of these polymers were shown to be co-crystallizable and manifested two-way reversible shape memory properties. Others have been shown to be effective in photodynamic therapy applications.

Report Title： Advancing Sustainable Applications of cellulose nanocrystals (CNC)-Reinforced Bio-Nanocomposites

Presenter： Ishak Ahmad

Introduction: Professor Dr. Ishak Ahmad, Dean of the Faculty of Science and Technology at Universiti Kebangsaan Malaysia (UKM), is a distinguished scholar in polymer materials science. His pioneering research focuses on sustainable polymer composites, particularly biodegradable nanomaterials for environmental remediation and medical applications. With 280+ peer-reviewed publications (Scopus H-index: 48), he has secured 12 patents. Prof. Ishak leads major national projects funded by Malaysia's Ministry of Higher Education, and directs the ASEAN-India "Green Packaging Solutions" initiative. His accolades include appointed as a Fellow of the Academy of Sciences Malaysia (FRSA, 2023), the National Academic Award in Material Science (2021), and consecutive gold medals at the International Invention Innovation & Technology Exhibition (2018, 2020). He currently collaborates with Tokyo Tech on smart polymer coatings and University of Indonesia (UI) on biocomposite materials.

Abstract: Cellulose nanocrystals (CNC), a renewable and sustainable biomaterial, have shown great potential as reinforcing fillers in the development of bio-nanocomposites for various applications. This study explores CNC's role in enhancing the mechanical, thermal, and functional properties of starch- and polyvinyl alcohol (PVA)-based composites. Starch/CNC biocomposite films were successfully fabricated via solution casting, demonstrating notable improvements in tensile strength, modulus, and thermal stability due to well-dispersed CNCs. In an effort to address food spoilage and reduce waste, starch-based bio-nanocomposites incorporating CNC, cinnamon oil, and polyaniline (PANI) were developed as intelligent packaging materials. The incorporation of CNC improved structural integrity, while 0.4 wt% PANI in the composite films offered optimal performance in detecting fish freshness with a radical scavenging activity of 15.18. These films degraded over 70% within a month, confirming their biodegradability and environmental compatibility. Gelatin-based hydrogels reinforced with CNC exhibited sensitivity to pH and temperature changes, along with improved mechanical stability, making them promising candidates for stimuli-responsive drug delivery systems. Additionally, PVA/CNC aerogels were produced by gamma irradiation (10–50 kGy) followed by freeze-drying, and further surface-modified using chemical vapor deposition with methyltrichlorosilane. The resulting aerogels exhibited superhydrophobic properties with water contact angles up to 158°, and improved

thermal stability with increased CNC content and irradiation dosage. Collectively, these findings highlight the versatility and multifunctionality of CNC-reinforced bio-nanocomposites for applications ranging from smart food packaging, biomedical hydrogels and hydrophobic aerogels, underscoring their potential in sustainable materials development.

Ishak Ahmad 教授现任马来西亚国立大学（UKM）科技学院院长，是可持续高分子材料领域的国际权威。其研究聚焦环境修复与医用可生物降解聚合物，主导开发农业废弃物基塑料及电子垃圾回收技术。累计发表 SCI 论文 280 余篇（Scopus H 指数 48），获授权专利 12 项。主持马来西亚高教部国家级项目 18 项，现任东盟-印度“Green Packaging Solutions”合作计划首席科学家。学术荣誉包括：马来西亚科学院院士（FRSA，2023）、马来西亚高教部国家学术奖（材料科学类，2021），并两度获国际发明创新技术展金奖（2018，2020）。现任马来西亚标准局环境材料技术委员会主席，与东京工业大学、蒙彼利埃大学共建智能涂层联合实验室。

Report Title: Eco-Friendly Extraction of Rutin and Quercetin from *Sophora japonica*: Technological Approach and Efficiency

Presenter: Maniakhin Artem

Brief Introduction: Currently holds the position of Technical Director at Ningbo Excare Pharm Inc., a Chinese company specializing in the research, production, and sale of natural plant-based ingredients and health products, including herbal extracts, amino acids, vitamins, and fine chemicals. Previously served as Head of the Laboratory of Medicinal Plants at the Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of Russian Academy of Sciences. Continues to actively promote collaboration with Russian scientific institutions, fostering cooperation between the two countries. Holds a Ph.D. in Biological Sciences and is a laureate of the Academician Neunulov Prize from the Academy of Agricultural Sciences (VASKhNIL) for a series of studies on secondary metabolites of plants from the Russian Far East. Author and co-author of more than 80 publications, with numerous graduate theses successfully defended under supervision at leading universities in the Russian Far East.

Abstract: Rutin and quercetin are natural flavonoids abundantly found in plants, valued for their strong antioxidant, anti-inflammatory, and vascular-protective properties. Rutin, a glycoside of quercetin, improves its bioavailability and stability in biological systems. Transitioning to green technologies for the extraction plant-derived compounds is critical for reducing environmental impact, eliminating toxic solvents, and ensuring safer, more sustainable production. These approaches are in line with global trends toward environmentally friendly and health-conscious manufacturing in the pharmaceutical and food industries. Conventional extraction methods often rely on large volumes of organic solvents. In this project, we aim to minimize—or entirely eliminate—their use. Implementing such a strategy enables the production of safer, higher-quality materials while avoiding toxic, costly, and hazardous chemicals.

报告题目：槐米中芦丁和槲皮素的环保提取：技术方法与效率研究

报告人：马尼亚欣·阿尔乔姆

简介：现任宁波亿克药业有限公司技术总监。该公司是一家中国企业，专注于天然植物成分和健康产品的研究、生产与销售，涵盖植物提取物、氨基酸、维生素以及精细化工产品等。此前曾任俄罗斯科学院远东分院东亚陆地生物多样性联邦科学中心药用植物实验室主任。至今仍积极推动与俄罗斯科研机构的合作，促进两国在科研领域的交流与协作。拥有生物学博士学位，曾因在研究俄罗斯远东植物次生代谢产物方面的一系列成果，荣获瓦斯赫尼尔科学院（VASKhNIL）设立的涅乌努洛夫院士奖。发表和合作发表学术论文 80 余篇，指导多位研究生在俄罗斯远东地区的重点高校完成毕业论文并成功答辩。

摘要：芦丁和槲皮素是广泛存在于植物中的天然类黄酮，以其强抗氧化、抗炎和血管保护作用而被高度重视。芦丁是槲皮素的苷类形式，可提高其在生物体系中的稳定性和生物利用度。采用绿色技术提取植物来源化合物，对于降低环境影响、替代有毒溶剂并实现更安全、可持续的生产至关重要。这一方向符合全球医药和食品行业向环保与健康导向制造转型的趋势。传统提取方法通常依赖大量有机溶剂，而本项目的目标是尽可能减少甚至完全避免其使用。该策略的实施有助于获得更高安全性和更高质量的产品，同时避免使用有毒、昂贵且具有危险性的化学物质。

Report Title： Cutting-edge developments in production of value added products from industrial wastes and natural sources

Presenter： Faouzi Ben Rebah

Introduction: Dr. Faouzi Ben Rebah, Associate Professor, Higher Institute of Biotechnology, University of Sfax, Tunisia. Teaching Area: Biological wastewater treatment, physicochemical wastewater treatment, environmental biotechnology, environmental microbiology, bioconversion, bioprocess, biological reactors, general chemistry, organic chemistry etc. Research Field: Wastewater treatments, sludge treatments, production of value added products from industrial wastes and natural sources.

Abstract: In this context, it is particularly important to highlight Tunisia's advancements in waste valorization, given its status as one of the world's top olive oil producers and a leading global supplier of dates. Tunisia faces significant challenges in managing olive mill wastewater (OMW) and solid pomace waste, which are highly polluting due to their high organic load and phenolic compounds. However, Tunisia has developed innovative solutions for OMW, including biogas production and repurposing pomace as fertilizer or animal feed. Researchers are also extracting antioxidants for cosmetics and converting waste into biofuels, creating economic value while supporting circular economy principles. Regarding, date palm industry, the generated waste (date pits, palm fronds, pruning residues) are valorized into various value products: pits are processed into activated carbon for water filtration or cosmetic oils, while fronds and fibers are repurposed as biodegradable packaging, biofuels, or handicraft materials. Innovative projects also explore fermenting date waste into bioethanol or composting it for organic fertilizers. By transforming date palm byproducts, Tunisia reduces agricultural waste while creating green jobs and supporting sustainable rural development, turning a traditional crop into a pillar of the circular economy.

Report Title： Catalyst development for CO_2 valorization to olefins and sustainable aviation fuel

Presenter： Poh Chee Kok

Brief Introduction: Dr. Poh graduated with a bachelor's degree in physics from the University of Malaya (1999) and obtained a PhD in Physics from National University of Singapore (NUS) in 2014 while working in A*STAR. He is currently a Principal Scientist and the Deputy Division Director of the Carbon Conversion and Future Energy Carriers at A*STAR's Institute of Sustainability for Chemicals, Energy and Environment (ISCE^2). His current research activities are focusing on catalyst development for low-carbon energy research including CO_2 upcycling and H_2 production from ammonia and methane; other research interests include plasma catalysis, electrocatalysis, surface science and energy materials. Dr. Poh has received the Institution of Engineers, Singapore (IES) Sustainability Awards 2024, for his impactful research in the field of CO_2 conversion to SAF. Dr. Poh's research has led to more than 80 publications on high-impact international peer-reviewed journals with more than 7,000 citations.

Abstract: The aviation industry is a sector which is difficult to decarbonize by battery and H_2 fuel in the next few decades, especially for long haul aircraft. Low carbon (drop-in) jet fuel, i.e. SAF (sustainable aviation fuel) is a near/medium solution to the problem. However, biofuel based SAF faces challenges of a feedstock crunch. In 2023, SAF accounted for less than 0.2% of total aviation fuel consumption in the world, with Neste in Singapore contributing about 67% of global SAF production. To overcome the feedstock limitation, CO_2-based SAF has great potential to complement biofuel since it is not limited by the challenges related to feedstocks such as competition with food production, concerns on deforestation and supply chain limitations. A multi-disciplinary team with expertise in catalysis and chemical engineering from ISCE^2 and IHI have developed technology to make SAF from CO2. Leveraging on our expertise in catalyst development in CO_2 to olefins, we achieved breakthrough in SAF technology. The breakthrough lies in catalyst, reactor and process design with the proprietary catalyst achieving highest C5+ yield of 31% in single pass reaction, compared to published results. There is also a smaller footprint, greater energy efficiency and reduction in capital investment compared to the two-step thermal catalytic technology. The breakthroughs allow for the combination of the endothermic Reverse Water Gas shift reaction and the exothermic Fischer-Tropsch Synthesis (FTS) in one single reactor, and process scale up to 100 kg CO_2 per day. Stemming from the breakthroughs, the SAF production test-rig that was installed and fully operational in ISCE^2 in 2024.

报告标题：二氧化碳转化为烯烃和可持续航空燃料的催化剂开发

报告人：傅梓国

简介：傅博士于 1999 年毕业于马来亚大学，获得物理学学士学位，并于 2014 年在任职于新加坡科技研究局（A*STAR）期间，获得新加坡国立大学（NUS）物理学博士学位。目前，他是 A*STAR 可持续化学、能源与环境研究所（ISCE^2）碳转化与未来能源载体部门的首席科学家兼副部门主任。他目前的研究工作聚焦于低碳能源领域的催化剂开发，包括二氧化碳的高值化利用及从氨和甲烷中制取氢气；其他研究兴趣包括等离子体催化、电催化、表面科学与能源材料。因在将 CO_2 转化为可持续航空燃料（SAF）方面的卓越研究成果，傅博士荣获 2024 年新加坡工程师学会（IES）可持续发展奖。他已在国际高影响力同行评审期刊上发表 80 余篇论文，引用次数超过 7,000 次。

摘要：航空业在未来几十年内难以通过电池或氢燃料实现去碳化，尤其是长途航班。低碳混合使用型航空煤油，即可持续航空燃料（SAF），被视为近期至中期可行的解决方案。然而，基于生物质的SAF面临原料供应紧张的问题。2023年，SAF仅占全球航空燃料消费总量的不到0.2%，其中位于新加坡的Neste公司贡献了全球约67%的SAF产量。为克服原料限制，基于CO_2的SAF展现出巨大的潜力，可作为生物燃料的有力补充，因为其不受与粮食生产竞争、森林砍伐问题以及供应链限制等因素的影响。ISCE^{2}与IHI公司组成的跨学科团队，依托催化与化工工程方面的专业知识，成功开发出由CO_2制备SAF的技术。基于团队在CO_2转化为烯烃方面的催化剂开发经验，我们在SAF技术上取得了突破性进展。该突破涉及催化剂、反应器与工艺设计，其专有催化剂在单程反应中实现了业界领先的C5+产率达31%。相比传统的两步热催化工艺，该技术具有更小的装置占地、更高的能效以及更低的资本投入。该工艺突破实现了吸热的逆水煤气反应与放热的费托合成反应在同一反应器中的耦合，并实现了以每日100公斤CO_2进料为基础的工艺放大验证。基于这一技术突破，SAF试验装置已于2024年在ISCE^{2}成功安装并投入运行。

Report Title： Fueling the Future- Formic Acid as a Low-carbon energy carrier

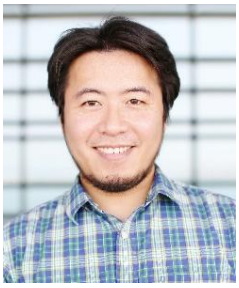
Presenter： Kuo-Wei Huang

Introduction: Professor Kuo-Wei Huang is currently Professor of Chemistry and Executive committee member of the Center for Renewable Energy and Storage Technologies at King Abdullah University of Science and Technology (KAUST) in Saudi Arabia, where he had also served as Associate Vice President for Research (2022.06-2025.06) and Director of the Chemical Science Program. He received his B.S. from National Taiwan University as a Yuan T. Lee Fellow and his Ph.D. from Stanford University as a Regina Casper Fellow. Before joining KAUST as a founding faculty member, he had served as an Assistant Professor at the National University of Singapore and as a Goldhaber Distinguished Fellow at Brookhaven National Laboratory. The research interests of his group include CO_2 utilization, hydrogen storage, small molecule activation (particularly on the $PN^3(P)$ ligand platform his group has developed and pioneered), and computational and kinetic mechanistic studies of catalysis. He was highlighted in "Pioneers and Influencers in Organometallic Chemistry" by Organometallics in 2020.

Abstract: The estimated world population of 8.0 billion consumed ~15.2 Gtoe of energy (at an average rate of 20.1 TW). Globally, the burning of carbon-based fossil fuels supplies over 80% of the energy demand, and hence, the prospering industrial societies are responsible for the observed increase in carbon dioxide levels from preindustrial 280 ppm to over 420 ppm now. The constantly increasing atmospheric CO_2 concentration is highly likely to result in global warming, sea level rise, and ocean acidification. To reduce the environmental footprint of modern societies and address the limitations of fossil resources, the projected increase in global energy demand must go along with implementing low-carbon energy production and carrier systems. In this presentation, the current energy status and future options will be discussed and compared. It will then be concluded by introducing our research efforts in utilizing formic acid as a low-carbon hydrogen/energy carrier and e-fuel.

报告题目：未来低碳能源载体: 甲酸

报　告　人：黄国维



简介：黄国维教授现为沙特阿拉伯阿卜杜拉国王科技大学化學系教授和再生能源與儲能技術中心执行委员，曾任协理副校长(Associate Vice President for Research) （2022.06-2025.06）与化学科主任。他在台湾大学以李远哲奖学金取得学士学位，并以雷吉娜·卡斯珀奖学金获得斯坦福大学博士学位。在加入 KAUST 担任创始教授之前，他曾任新加坡国立大学助理教授及布鲁克海文国家实验室 Goldhaber 杰出研究员。他的研究兴趣包括二氧化碳利用、氢储存、小分子活化（特别是其团队开发并开创的 $PN^3(P)$配体平台）以及催化反应的计算与动力学机理研究。共发表学术论文 340 多篇，被他人引用 20000 多次，国际专利申请与受权 40 多项， 包含世界唯一甲酸发电新能源电池系统专利。他在 2020 年《有机金属化学》杂志获评为“有机金属化学领域的先驱与影响力人物”。

简介内容：全球约为 80 亿的人口，平均消耗能源的速率约为 20.1 太瓦。在全球范围内，碳基化石燃料的使用超过了 80%的能源需求，因此，工业化社会的发展是导致二氧化碳浓度从工业革命前的 280 ppm 升至目前的 420 ppm 以上的直接原因。大气中二氧化碳浓度的持续上升极有可能导致全球变暖、海平面上升和海洋酸化。为减少现代社会的环境足迹并应对化石资源的局限性，全球能源需求增长必须与低碳能源生产及载体系统的实施同步推进。本报告将讨论并比较当前能源状况及未来选项，最后通过介绍我方在利用甲酸作为低碳氢/能源载体及电子燃料方面的研究成果进行总结。

Report Title： Multifunctional Materials for Sustainable Chemicals and Energy production

Presenter： Zhang Lili

Introduction: Professor Zhang is Director of the Emerging Technologies at A*STAR's Institute of Sustainability for Chemicals, Energy and Environment (ISCE^2), and an Adjunct professor in NTU. Prof. Zhang is also the Deputy Lab Director for ExxonMobil-NTU-A*STAR Corporate Lab, to develop solutions that would help lower carbon emissions, contribute to resource efficiency, and help build a more sustainable future. Prof. Zhang has received A*STAR Fellow award, Sustainability award, Outstanding Asian Researcher and Engineer Award, and Clarivate's list of Highly Cited Researchers^{TM}, for her impactful research in the field of low-carbon technologies, clean energy production and utilization, waste upcycling and carbon-based materials for energy storage and catalysis. Prof. Zhang's research has led to more than 100 publications on high-impact international peer-reviewed journals with more than 30,000 citations.

Abstract: Functional catalytic materials with precisely defined coordination environments and active centers are pivotal in driving sustainable processes for chemical and fuel production using atom-efficient and environmentally friendly methods. Despite advancements, constructing catalytic sites at the atomic level with favorable structures to achieve targeted products remains a significant challenge. An even greater challenge lies in scaling up the production of these advanced catalysts with highly active centers for broader application. In this talk, I will discuss strategies for designing multifunctional catalysts that exhibit good catalytic performance in CO_2 activation, clean energy production, and energy storage and conversion. Furthermore, I will talk about how use-inspired basic research, when coupled with an accelerated catalyst development platform, bridges the gap between innovation and application. This integrated approach not only advances catalyst development but also expedites the transition of emerging technologies from the lab to the market, addressing critical global challenges in sustainability and energy.

报告题目：可持续化学品与能源生产的多功能材料

报　告　人：张丽莉

简介：张教授是新加坡科技研究局（A*STAR）可持续发展化学、能源与环境研究院（ISCE^2）新兴科技部门的主任，同时兼任南洋理工大学客座教授。她还担任埃克森美孚-南大-A*STAR 企业实验室副主任，致力于开发降低碳排放、提升资源利用效率的解决方案，助力构建可持续的未来。因其在低碳技术、清洁能源生产利用、废弃物升级回收以及碳基材料用于能源存储与催化等领域的卓越研究贡献，张教授荣获 A*STAR 院士奖、可持续发展奖、亚洲杰出科研工程师奖，并入选科睿唯安"高被引科学家"名录。她的研究成果已在高影响力国际同行评审期刊发表论文逾百篇，被引用超过三万次。

简介内容：具有精确配位环境与活性中心的功能催化材料，对于推动原子经济型、环境友好型的化学品与燃料可持续生产至关重要。尽管研究不断深入，如何在原子尺度构建结构优化的催化位点以实现目标产物精准合成仍面临重大挑战。而将这些具有高活性中心的先进催化剂规模化生产以拓展应用范围，则存在着更大的技术壁垒。本次报告将探讨多功能催化剂的设计策略，展示其在二氧化碳活化、清洁能源制备及储能转化中的优异催化性能。此外，我将阐述"应用导向型基础研究"以及如何结合催化剂加速开发平台，弥合创新与产业化之间的鸿沟。这种融合方法不仅能推动催化剂研发进程，更能加速新兴技术从实验室走向市场的转化，为应对全球可持续发展与能源领域的重大挑战提供解决方案。

Report Title： CO_2 sorbents from industrial waste

Presenter： Brenda Cecilia Alcántar Vázquez

Brief Introduction: Dr. Brenda Cecilia Alcántar Vázquez received her Master of Science and PhD degrees from the Autonomous University of Baja California, Mexico, in 2010 and 2014, respectively. She had postdoctoral fellowships at the Institute of Materials Research and the Institute of Engineering, UNAM, in 2014 and 2015, respectively. Since 2018, she has been working at the Institute of Engineering at UNAM as a C-level researcher and has been recognized as a Level 1 National Researcher by Mexico's Ministry of Science, Humanities, Technology, and Innovation. She received the Young Scholar Award in Technological Innovation and Industrial Design from UNAM in 2024. Her research focuses on the high-value utilization of industrial waste and by-products, particularly in carbon dioxide and carbon monoxide capture processes and hydrogen production technologies. She has published 32 academic papers in high-impact international peer-reviewed journals, co-authored four book chapters, and frequently presented her research at international conferences.

Abstract: CO_2 management has been promoted and proposed in recent years due to the negative effects of increasing CO_2 emissions. That is why developing and deploying carbon capture, utilization and storage (CCUS) technologies has been widely recognized as a strong alternative for decarbonizing industry and promoting net CO_2 removal from the atmosphere. One critical point to implementing CCUS technologies is the CO_2 sorbent material, which must have high CO_2 sorption capacity and stability under different gas stream conditions, good kinetics, and be able to regenerate at a low cost. It is thus that under the circular economy approach, the use of industrial waste as raw material for preparing CO_2 sorbent materials is an attractive topic due to the advantages it offers, such as availability, abundance, low cost, high reactivity, and a complex matrix where the presence of different elements can favor capture or regeneration processes. In this project, various industrial waste, such as geothermal silica, construction and demolition waste, and metallurgical slags, were used to prepare CO_2 sorbents suitable for both low and high temperatures, and the CO_2 capture behavior and regenerative properties were evaluated.

报告题目：工业废料中的二氧化碳吸附剂

报 告 人：Brenda Cecilia Alcántar Vázquez

简介：Dr. Brenda Cecilia Alcántar Vázquez 于 2010 年和 2014 年分别获得墨西哥下加利福尼亚自治大学理学硕士与博士学位。2014 年和 2015 年，她分别在墨西哥国立自治大学材料研究所与工程学院获得博士后奖学金。自 2018 年起，她任职于墨西哥国立自治大学工程研究所，现为 C 级研究员，并被列为墨西哥科学、人文、技术与创新部的国家一级研究员。她于 2024 年获得墨西哥国立大学颁发的技术创新与工业设计领域青年学者奖。她的研究聚焦于工业废弃物和副产品的高值化利用，主要应用于二氧化碳与一氧化碳的捕集过程及制氢技术。她已在国际高影响力的同行评审期刊上发表了 32 篇学术论文，参与撰写 4 篇专著章节，并多次在国际会议上作学术报告。

摘要：近年来，由于二氧化碳排放增加带来的负面影响，人们提倡并提出了二氧化碳管理。因此，开发和部署碳捕获、利用和储存 (CCUS) 技术已被广泛认为是实现工业脱碳和促进大气中二氧化碳净去除的有力替代方案。实施 CCUS 技术的一个关键点是二氧化碳吸附剂材料，该材料必须具有较高的二氧化碳吸附能力和在不同气流条件下的稳定性、良好的动力学以及能够以较低的成本再生。因此，在循环经济方法下，利用工业废料作为原料制备二氧化碳吸附剂材料是一个很有吸引力的研究方向，因为它具有诸多优势，例如可用性高、丰富、成本低、反应性高，以及基质复杂，其中不同元素的存在可以有利于捕获或再生过程。本项目利用地热硅石、建筑拆除废料、冶金渣等各种工业废料，制备了适用于低温和高温的二氧化碳吸附剂，并对其捕获行为和再生性能进行了评估。

Report Title: Photothermal, Photochemical, or Photo-dipole? Elucidating the Mechanisms of Light-Driven Nanocatalysis

Presenter：R.D. Rodriguez

Introduction: Prof. Dr. Raul D. Rodriguez, a Full Professor at Tomsk Polytechnic University, is an expert in nanoscale analysis and materials science. He previously led research at Chemnitz University of Technology in Germany and holds a Ph.D. with highest honors from Sorbonne University, Paris, France. His work, supported by numerous grants, focuses on areas like laser interaction with matter and pesticide detection, and he has made significant contributions to developing AFM probes and nanosensors as well as new methods for flexible electronics fabrication. He has received several scientific awards, including the Tomsk Region Prize and CAS funding as an Invited Professor.

Abstract: Harnessing light to drive chemical reactions is a cornerstone of green chemistry, yet a fundamental question often remains unanswered: is light acting as a nanoscale furnace, a precise chemical scalpel, or something else entirely? Our research demonstrates that a one-size-fits-all model for light-driven nanocatalysis is insufficient. By investigating a range of 2D and plasmonic materials, we have disentangled the distinct mechanisms that govern these transformations.

We reveal that in systems like graphene oxide, photochemical processes dominate, where photon energy directly cleaves chemical bonds at temperatures far below the thermal threshold. In contrast, the laser-induced activation of materials such as MoS_2 is unequivocally photothermal, where localized heating forges catalytically active defect sites. In plasmonic systems, we challenge the conventional wisdom that 'hot electrons' are the sole drivers of catalysis. Using in-situ nanoscale thermometry, we have quantified the critical role of plasmonic heating, revealing that photothermal effects can enable gold nanoparticles to exhibit superior catalytic efficiency compared to silver, as they reach temperatures exceeding 100°C. Most recently, we have uncovered a third, distinct mechanism in the 2D semiconductor As_2S_3: a photo-dipole effect. Here, light generates localized self-trapped excitons that modulate the surface potential, enhancing catalysis without producing free charge carriers. This talk will elucidate this toolkit of mechanisms, demonstrating how a deeper understanding of light-matter interactions is essential for engineering the next generation of highly efficient and sustainable catalysts.

Report Title： Engineering 2D materials for sensing and catalysis

Presenter： Sheremet Evgeniya

Introduction: Professor Evgeniya Sheremet of Tomsk Polytechnic University co-leads the TERS-Team research group, focusing on the application of nanomaterials, including 2D structures, for next-generation flexible sensing technologies. Her research involves fabricating innovative devices and catalysts from materials such as graphene and MoS_2 via laser processing. Supported by international grants, her work is dedicated to advancing the development of durable, multi-functional sensors using this technique.

Abstract: Two-dimensional (2D) materials offer a diverse range of properties, making them exceptional candidates for engineering functional devices and composites. A primary challenge, however, is precisely tuning these properties for specific applications. This presentation demonstrates how laser processing serves as a versatile tool to engineer 2D materials for advanced sensing and catalysis. We will showcase several key examples of this approach. For instance, to overcome the environmental instability that often limits the practical use of MXenes, we show how laser fabrication of robust composites enhances their stability. Furthermore, we demonstrate the enhancement of gas sensing capabilities in semiconducting MoS_2, where laser-induced modifications create active sites that improve sensitivity to analytes, such as solvent vapors. In the realm of catalysis, the technique enables the creation of controlled defects and heterostructures with metal oxide nanoparticles, effectively driving targeted photocatalytic reactions. Collectively, these examples demonstrate laser processing as a powerful and scalable platform for tailoring the properties of 2D materials for next-generation technologies.

Report Title： Chiral pyridine ligands for diverse asymmetric catalysis

Presenter： Saima Perveen

Introduction: Dr. Saima Perveen is an Associate Professor at Xi'an Jiaotong University's School of Chemistry, with a Ph.D. from CAS's Fujian Institute of Research on the Structure of Matter (2018). After post-doctoral work at Xi'an Jiaotong University, she joined the faculty and has received awards like the National Science Fund for Distinguished Young Scientists. She leads projects funded by NSFC and international programs, has published first-author papers in journals such as Angewandte Chemie, and serves on the editorial board of American Journal of Applied Chemistry. Her expertise spans asymmetric catalysis (organo- and metal-catalysis), with commercialized chiral bipyridine ligands, and research interests in metal-organic complexes, photocatalysis, and natural products.

Abstract: Chiral pyridine-derived ligands have been extensively used in catalysis over the past half-century, yet their development has been hindered by challenges in balancing reactivity and stereoselectivity; that is, while enhanced stereoselectivity may be achieved by introducing chiral elements close to the N atom, the concomitant increase in local steric hindrance often limits catalytic activity and scope. Our newly designed chiral pyridine unit (CPU) features a rigid [6-5-3] fused-ring framework and a tunable spirocyclic ketal side wall. This innovative structure minimizes local steric hindrance while allowing for peripheral tuning through remote substituents, thereby achieving both high reactivity and stereoselectivity. Different chelating ligands were readily assembled using this chiral structural module, with applications in mechanistically diverse transition-metal-catalyzed reactions. Thus, a series of chiral 2,2′-bipyridine ligands were successfully employed in the development of a general, efficient, and highly enantioselective nickel-catalyzed intermolecular reductive addition, Ullmann coupling of ortho-chlorinated aryl aldehydes, and carboxylation of benzylic (pseudo)halides with CO_2 and reductive amidation of benzylic (pseudo)halides with isocyanates. Notably, these chiral 2,2′-bipyridine ligands exhibited superior catalytic activity compared to conventional N-based ligands.

Report Title： Elucidating Electron Transfer Events in Polypyridine Nickel Complexes

Presenter： Craig S. Day

Introduction: Assistant Professor at the Department of Chemistry, University of Copenhagen, Denmark. This year, he began his independent career as the recipient of the NovoNordisk Foundation's RECRUIT grant and has received multiple early career distinctions. Recently, he was nominated as the Danish Organometallic representative of EuChemS, and was selected to join the Danish Young Academy of Science. He has received the 2024 Scripps-Sinocompound Young Investigator award, the 2023 BASF-ICIQ PhD award, and the 2023 IUPAC-SOLVAY International Award for Young Chemists, which recognized his PhD thesis as one of the five best Chemistry PhD theses globally. He has also been the Danish and European nominee to attend various Young Investigator Workshops.

Abstract: Polypyridine ligated nickel complexes have found considerable utility as privileged catalysts in a wide variety of cross-coupling reactions. The rapid adoption of these complexes is tentatively attributed to their ability to shuttle between different oxidation states that is enabled by facile electron-transfer. While disproportionation, comproportionation or reduction events play an important role in Ni-catalyzed cross-coupling reactions, the factors responsible for enabling electron-transfer are poorly understood in mechanistic terms. Indeed, progress in this field is mainly based on empirical discoveries. Herein, we disclose an unprecedented look into the reactivity of pseudohalide and halide ligated Ni(II) complexes supported by polypyridine ligands. We have found that the nature of the anionic ligand has a striking impact on the key electron-transfer events. From a broader perspective, this study provides rationalizations to previously overlooked and fundamental steps within the Ni-catalyzed cross-coupling arena, thus offering a new gateway for designing future Ni-catalyzed endeavors.

报告题目：绿色氧钯化用于合成双四氢呋喃骨架及其机理和立体选择性研究

报　告　人：戴伟民

简介：1982 年 7 月获杭州大学化学系理学学士、1984 年 12 月获中科院上海有机化学研究所理学硕士、1990 年 3 月获京都大学药学博士。1990 年 5 月至 1992 年 8 月任美国 Scripps 研究所博士后研究员。1992 年 9 月至 2023 年 6 月任职于香港科技大学化学系约 31 年，历任助理教授、副教授和教授，现在是香港科技大学化学系荣休教授和兼任教授。曾获教育部长江学者奖励计划特聘教授，于 2003 年起在浙江大学化学系开展合作研究。近年的主要学术成就包括开发了独有的基于芳基甲酰胺骨架的 Aphos 系列磷氧半稳定双配位配体，用于温和条件下的烷基硼 Suzuki–Miyaura 偶联反应；建立了多模块组装的合成策略，用于海洋大环内酯类天然产物的多样性全合成和结构修正。

内容简介：常见于天然产物的双四氢呋喃骨架是一类具有潜在应用价值的分子砌块。源于海洋的22元环内酯Iriomoteolide-13a具有较好的杀死癌细胞的活性。它的建议结构中各含一个并双四氢呋喃环、联双四氢呋喃环、以及四氢吡喃环，是一个极具挑战性的全合成目标分子。含羟基烯烃的分子内氧钯化反应是一种绿色和高效地合成环醚的策略，该反应具有很好的原子经济性以及多羟基烯烃底物的高化学和立体选择性。作为Iriomoteolide-13a全合成项目的组成部分，我们对分子内的顺式选择氧钯化反应进行了机理和立体选择性研究，成功构筑了C17–C30联双四氢呋喃环，并经X-线单晶结构解析确定了产物的绝对构型，并且实现了Iriomoteolide-13a建议结构的全合成。

Report Title: Steric-on-Demand Phosphine Ligands for Tackling Highly Steric-Congested Cross-Coupling Processes

Presenter: Fuk Yee (Michael) KWONG (邝福儿)

Introduction: Prof. Fuk Yee (Michael) KWONG is currently the Head of Department of Chemistry at The Chinese University of Hong Kong. He graduated in CUHK in 2000 and pursued postdoctoral study at Massachusetts Institute of Technology (2001-2003). He was the group manager at Prof. Albert S.C. Chan's research group during 2003-2004. He started his independent career at the Hong Kong Polytechnic University in 2004, and was promoted to Associate Professor and Full Professor in 2010 and 2014, respectively. He received the President Award in Research in 2012 at PolyU. In addition, he was awarded as the Croucher Senior Research Fellow in 2013, and recognized as the Raising Star Award in Singapore in 2014. In 2017, he returned to his Alma mater, CUHK, serving as full professor. He serves as the Editor-in-Chief of the *Journal of Heterocyclic Chemistry*, Wiley.

Abstract: Cross-coupling protocol has emerged as a highly versatile way for assembling creative and useful molecules (*Acc. Chem. Res*. **2022**, 3688). By manipulating the phosphine ligand chassis and thus adjusting the geometry of associated metal complexes, a diverse range of these cutting-edge processes has been successfully established as valuable synthetic schemes. Coupling reactions leading to the generation of $C_{(Ar)}$–$C_{(Ar')}$ biaryl axis in highly steric-hindered environment have presented significant challenges. The use of exceptionally bulky ligands can impede the approach of the substrate to the metal center, potentially diminishing the efficiency of substrate binding. Yet, these bulky ligands can facilitate the reductive elimination process, creating a dilemma in the selection of appropriate phosphine ligands for tackling extremely steric-congested cross-coupling reactions. Herein, we present a ligand design that particularly fits for cross-coupling reactions between highly steric bulky electrophiles and nucleophiles, *via* a fleeting steric-on-demand profile in relieving the overly crowded environment (*JACS* **2022**, 14864).

Report Title： Several Silylation Strategies: A Journey from Dehydrogenative to Dealkynative Coupling

Presenter： Krzysztof Kuciński

Introduction: Krzysztof Kuciński was born in Inowrocław, Poland and received his undergraduate degree in chemistry from the Adam Mickiewicz University in Poznań, where he worked with Prof. dr. Bogdan Marciniec. In 2014, he began his doctoral studies with Professor Grzegorz Hreczycho at the same University, before undertaking a postdoctoral position with Professor Lutz Ackermann at Georg-August-Universität Göttingen, Germany in 2020. He continues his career at Adam Mickiewicz University in Poznań as the associate professor. His recent awards and distinctions include a START Scholarship given by Foundation for Polish Science for Best Young Researchers (2018), Polish Ministry of Science and Higher Education Fellowship for best young researchers (2019), a Bekker Scholarship from NAWA (2019), and the NCN Grants (Preludium – 2015, Etiuda – 2017, Sonata – 2022, and Sonata BIS – 2025). His research interests include organoboron and organosilicon chemistry with a strong emphasis on the sustainability of the processes. He is the co-author of 48 publications, with a Hirsch index of 18.

Abstract: Silylation of organic and organometalloidal compounds offers a strategic method to produce valuable siloxanes and silyl-protected intermediates, including silyl ethers and silylacetylenes. While derivatives with acidic protons, such as alcohols, phenols, and silanols, can be readily silylated, halosilanes are typically employed for this purpose. However, given the challenges associated with these reagents, including high moisture sensitivity, stoichiometric base requirements, and the formation of corrosive byproducts, there is a growing interest in more sustainable alternatives. Accordingly, catalysts rich in naturally abundant elements have been gaining attention. As a result, several methods emphasizing main group species and/or Earth-abundant 3d metals are under investigation. In this communication, we highlight the catalytic silylation of alcohols, silanols, terminal alkynes, and primary amines using different silylation agents. This process facilitates the formation of C-Si, O-Si, and N-Si bonds in a single step.

报告题目：模拟卤素过氧酶在有机合成中的绿色氧化

报　告　人：童荣标

简介：童荣标出生于广东省普宁市，本科和硕士毕业于湖南大学化学化工学院（1996-2000 & 2000-2003）。2003-2008年，于美国艾莫莉大学（Emory University）化学系攻读有机化学博士学位，师从Frank E. McDonald教授研究聚环氧化合物的仿生环化反应并应用于天然产物的全合成，随后到美国费城的常春藤盟校宾夕法尼亚大学（University of Pennsylvania）Amos B. Smith, III教授实验室从事博士后研究（2008-2011）。2011年7月加入香港科技大学化学系，任助理教授（tenure-track），博士生导师，2017年晋升为长聘副教授，2023年晋升为教授（长聘教授）。课题组研究方向聚焦于复杂天然产物全合成、有机合成方法学、绿色化学、药物化学和化学生物学等研究，在本领域重要期刊上发表SCI论文100余篇，其中通讯作者论文90余篇；专利10项。童荣标教授的研究获得香港研资局（RGC，相当于国家自然科学基金委）的长期、稳定资助（>$2700万港币）。童荣标教授最近获得香港研资局（大学教育资助委员会）>1000万港币联合合作项目(Collaborative Research Fund, CRF，相当于国家自然科学基金委的重点项目)，主持开发新型抗生素，发现了一系列具有超强抗菌活性、具有临床应用前景的化合物。

报告摘要：卤素过氧酶是一类多功能酶，可催化卤素（如氯、溴或碘）掺入有机底物中，这是卤代化合物生物合成所必需的过程。这些酶利用过氧化氢（H_2O_2） 作为氧化剂，激活卤化物离子，使其能够附着在各种有机分子上。卤过氧酶存在于海洋、陆地和微生物中，从帮助海藻产生抗菌防御到协助真菌和细菌合成生物活性代谢物，它们发挥着关键的生态作用。虽然有许多关于模拟卤过氧酶的报道，但这些功能模拟物在有机合成中的应用非常有限。在本文中，我们介绍了我们发现的卤素过氧酶的新型功能性模拟物，并展示了它们在有机合成中的实际用途。溴化铁（带/不带配体的 Fe-Br）是一种超级试剂，可与过氧化氢快速反应生成反应性溴化物质（RBS，如 Br-OH），这是一种多功能氧化剂，可用于各种转化，包括芳烃溴化、Hunsdiecker 脱羧溴化、Achmatowicz 重排和醇/吲哚/硫化物氧化。这些氧化方法的绿色特性和低成本与其他氧化/溴化方法相比增加了优势。

Report Title: Integrated carbon capture and utilization for Sustainable carbon mining
Presenter: Hai Yu

Introduction: Hai Yu is a Principal Research Scientist and Project Leader at CSIRO Energy, specializing in carbon capture and utilization technologies. With extensive expertise in liquid absorbent-based CO_2 capture, he has been at the forefront of developing and advancing innovative solutions for sustainable carbon management. His work involves close collaboration with industry partners, contributing to the design, construction, and operation of pilot plants to test carbon capture technologies under real flue gas conditions. Yu's research extends to direct air capture and CO_2 conversion, aiming to integrate these processes into practical applications for low-emission material production.

Abstract: Yu's research focuses on integrated carbon capture and utilization (CCU) for sustainable carbon mining. A key achievement is the development of the advanced liquid absorbent CAL008, which has demonstrated superior performance in pilot plant trials (e.g., a 5000-hour test at AGL Loy Yang Power Station) compared to traditional MEA-based absorbents, with benefits including resistance to NOx, lower reboiler duty (<2.5 GJ/t CO_2), reduced amine consumption (<0.3 kg/t CO_2), and biodegradability. He is also leading efforts to commercialize CAL008 technology. Additionally, his team is developing novel processes such as Integrated Absorption and Mineralization (IAM) for construction materials from CO_2 and alkaline wastes, and Integrated Capture and Electrolysis (ICE) for renewable fuels/chemicals, eliminating energy-intensive regeneration steps to support a circular economy.

Report Title: Phenolics Production from biomass via Coupling in-situ Hydrogen Generation and Hydrodeoxygenation

Presenter: Yong Guo

Introduction: Professor Guo Yong is a jointly appointed scholar at Shihezi University and East China University of Science and Technology (ECUST), specializing in catalytic biomass conversion and polymer functionalization. With dual affiliations in Xinjiang and Shanghai, his research focuses on sustainable utilization of Xinjiang's agricultural wastes (particularly cotton stalks) through advanced thermo-chemical processes including CO_2-assisted pyrolysis and hydrodeoxygenation. Prof. Guo has developed three patented waste conversion technologies, published over 15 SCI papers in top journals like Applied Catalysis B, and currently leads a ¥3.2 million NSFC key project on plastic waste catalytic reforming

Abstract: Alcohol aqueous phase reforming is an important pathway for hydrogen production from biomass derivatives, capable of transforming polyols, glucose, and other high-boiling-point sugar alcohols into hydrogen gas under aqueous conditions. Both cellulose and hemicellulose in lignocellulose are polysaccharides, and lignin itself contains functional groups such as fatty alcohols and methoxy, making it suitable as a feedstock for reforming reactions. By leveraging the hydrogen atoms in the structural units of lignin and those in water, we have synthesized 4-ethylphenol with higher added value from organic lignin in one step, identifying demethoxylation as the rate-limiting step of the reaction. Utilizing the hemicellulose component in lignocellulose, an efficient separation of the three main components (cellulose, hemicellulose, and lignin) is achieved on a Pt/NiAl2O4 catalyst through a coupled process of hydrolysis, aqueous phase reforming, and hydrogenolysis deoxygenation, without the addition of any external hydrogen source. Furthermore, by exploiting the differences in structure and reactivity among cellulose, hemicellulose, and lignin, the reforming of hemicellulose provides a hydrogen source, facilitating the separation of the three components in birch wood sawdust under conditions free of external hydrogen sources. This process yields lignin oil at high rates while preserving the integrity of the cellulose structure. The delignification rate and the retention rate of cellulose can reach over 90%..

Report Title: Creation of environmentally friendly technologies for processing plant, mineral raw materials and man-made waste in Kazakhstan based on the principles of green chemistry

Presenter: Zair Tairovich Ibragimov

Introduction: Zair Ibraimov is a dedicated researcher and lecturer specializing in Chemical Engineering and Inorganic Chemistry, currently affiliated with al-Farabi Kazakh National University (KazNU). With a strong academic background—including a PhD in Chemical Engineering (2021–2024) and international internship experience at the University of Trento—he focuses on supercritical CO_2 extraction, rare earth element (REE) recovery from industrial waste (e.g., phosphogypsum), and sustainable material synthesis (e.g., activated carbons from biomass). His work bridges environmental remediation and resource optimization, evidenced by his role in projects like CO_2 capture technologies and rubber compound enhancement using thermal power plant waste. As a Research Fellow at CPCMA, he has contributed to 9 Q1/Q2 publications (e.g., Journal of CO_2 Utilization, ACS Omega) and currently supervises studies on bioactive oil stability and CO_2/N_2 separation.

Abstract: Ibraimov's research centers on green chemistry and waste valorization, particularly: Supercritical fluid applications: Optimizing CO_2 extraction for REEs (phosphogypsum) and essential oils (Mint spicata); Circular economy: Converting biomass/industrial waste (fly ash, plant residues) into functional materials like activated carbons for CO_2 capture and heavy metal sorption; Process kinetics: Investigating leaching dynamics of REEs from Kazakh deposits (e.g., Kundybai). His collaborative projects, published in high-impact journals (combined IF > 5.9), highlight innovations in sustainable chemical engineering, earning recognition at international conferences like the Beremzhanovsky Congress.

Report Title: Green synthesis of silver nanoparticles using selected extracts of medicinal plants from Kazakhstan and investigation of their biological activity
Presenter: Berganayeva Gulzat

Introduction: Gulzat Ergazievna Berganayeva, born on February 18, 1978, is a distinguished expert in organic chemistry and the chemistry of natural compounds, with a focus on nitrogen-containing heterocyclic compounds and their structural analysis using modern techniques like NMR and IR spectroscopy. She holds a Candidate of Chemical Sciences degree (PhD equivalent) in Organic Chemistry from Al-Farabi Kazakh National University, where she currently serves as Acting Associate Professor and Deputy Head of the Department of Chemistry and Technology of Organic Substances, Natural Compounds and Polymers. With a career spanning over 20 years, she has held roles at institutions including the A.B. Bekturov Institute of Chemical Sciences and Kazakh National Medical University, gaining extensive experience in research, teaching, and academic administration.

Abstract: Berganayeva's research centers on organic chemistry, particularly the synthesis and stereochemistry of heterocyclic compounds, as well as the phytochemical analysis of natural products and their biological activities. She has co-authored over 45 scientific publications (with an h-index of 3) and two educational textbooks on biochemistry. Her recent work focuses on developing environmentally friendly pharmacological substances for skin diseases and non-opioid analgesics, leading projects funded by the Ministry of Science and Higher Education of Kazakhstan. She also holds three patents, including one for a method to protect fruit orchards from pests, and has contributed to studies on medicinal plants, silver nanoparticles, and natural extracts, published in journals such as Molecules and Processes.

Report Title: Thermal Co-Processing of Petroleum Residues and Waste Oils: Yield and Characterization of Coking Products

Presenter: Aruzhan Kenessova

Introduction: Aruzhan Kenessova is a PhD researcher in Chemical Engineering at Al-Farabi Kazakh National University, Kazakhstan, specializing in adsorption-based water treatment technologies. Her research focuses on desalination using mineral-based adsorbents, sorption removal of heavy metal ions from aqueous environments, and thermal co-processing of petroleum residues and waste oils. Currently working at the Laboratory of Petrochemistry, she has actively contributed to national research projects and has teaching experience in physical chemistry at the undergraduate level. Aruzhan holds a Master's and Bachelor's degree in Chemical Technology of Inorganic Substances and has published her work, which is accessible through ORCID, Scopus, and Google Scholar.

Abstract: Aruzhan Kenessova's research addresses critical environmental challenges through innovative adsorption techniques, particularly in water purification and resource recovery. Her work includes the development of composite sorbents from mineral and plant-based materials for heavy metal removal and desalination, as well as sustainable thermal processing methods for petroleum waste. As an active participant in state-funded scientific projects, she combines academic research with practical applications, contributing to advancements in petrochemistry and environmental engineering. Her interdisciplinary approach underscores her commitment to sustainable solutions in chemical engineering.

Report Title: Study of synthesis and application of superabsorbent polymer hydrogels for water resource management
Presenter: Azimov Abdugani Mutalovich

Introduction: Azimov Abdugani Mutalovich, born on May 25, 1978, in Tashkent, Uzbekistan, holds Kazakh nationality and is fluent in Kazakh, Russian, and conversational English. He earned his PhD in "Chemical Technology of Inorganic Substances" from South Kazakhstan University named after M. Auezova, where he currently serves as Head of the Research Laboratory "Innovative Water Treatment Systems." With 18 years of scientific and pedagogical experience, his career spans roles such as assistant, senior lecturer, director of a research institute, and head of multiple laboratories. He is an Academician of the International Academy of Informatization (Kazakhstan) and the Turan Academy of Sciences (Uzbekistan), and has supervised three PhD students in fields like environmental protection and innovative textiles.

Abstract: Azimov's research focuses on water treatment technologies, adsorbent development, environmental monitoring, and industrial waste utilization. He has published over 100 scientific papers (with 17 indexed in Scopus) and holds more than 10 patents from Kazakhstan and Russia, covering inventions like membrane apparatuses and solar dryers. Key projects include leading environmental monitoring of groundwater sources in southern Kazakhstan and contributing to the development of activated carbon production and fruit processing technologies. His accolades include the "Best University Teacher of 2021" grant, the "Honored Worker of the Republic of Kazakhstan" badge (2022), and a Bolashak scholarship for a 2012–2013 internship in water purification technologies in Russia. His Hirsch index is 8, reflecting impactful contributions to applied chemistry and environmental science.

Report Title: Corrosion studies on some novel coatings based on o-anisidine
Presenter: Bakhytzhan Yeldana

Introduction: Yeldana Bakhytzhan is a Ph.D. holder and researcher with over 10 years of experience in chemistry and materials science, currently serving as a Senior Lecturer at Al-Farabi Kazakh National University and a Researcher at the Center for Physico-Chemical Methods of Research and Analysis. She earned her Ph.D. (2018–2021), MSc (2016–2018), and BSc (2012–2016) from the same university, with high GPAs in her master's and bachelor's studies. Her international experience includes research internships at Madirel Laboratory in Marseille, France (2017, 2023) and Nazarbayev University in Astana, Kazakhstan (2021). Additionally, she has been the head coach and scientific supervisor of Kazakhstan's national Chemistry Olympiad team since 2023, training students for international competitions.

Abstract: Bakhytzhan's research focuses on chemical and physicochemical analysis, corrosion inhibition, and the synthesis of nanocomposite polymer coatings with high anticorrosive properties, particularly for steel surfaces. Her work includes studying corrosion behavior of nanocomposite coatings (e.g., POA/Me_xO_y) and developing innovative materials. She has presented her research at international conferences, including those in Istanbul (2019, 2023), Tashkent (2023), and Barcelona (2024). With expertise in GMP compliance, data analysis, and interdisciplinary collaboration, she also contributes to academic outreach by organizing training camps and workshops for chemistry students, bridging research and education in materials science and corrosion engineering.

Report Title: The challenges of reusing thermal power plant wastes to produce cellular concrete modified with wollastonite

Presenter: Mominova Saule

Introduction: Saule Mominova, born on June 26, 1984, is a Kazakh national with extensive experience in academia and research. She holds a higher education degree in Foreign Philology (two foreign languages) from Kh.A.Yasaui International Kazakh-Turk University (2001–2006) and completed postgraduate studies in Pedagogy and Teaching Methods of Primary Education (2014–2016) and Production of Building Materials, Products and Structures (2016–2019) at M.Auezov South Kazakhstan State University. She has a strong professional background, serving as a lecturer at institutions like Shymkent Medical College and Kh.A.Yasaui International Kazakh-Turk University, and currently works as a Project Manager and Postdoctoral Researcher (since 2023). Fluent in Kazakh (mother tongue), Russian, and English, she possesses teamworking skills, creativity, and a strong sense of responsibility.

Abstract: Mominova's academic and research focus spans pedagogy, teaching methods, and the production of building materials, products, and structures. Her postgraduate studies have equipped her with expertise in these interdisciplinary fields, bridging education and engineering. She further enhanced her pedagogical and leadership skills through an internship at the University of Minnesota (2023–2024) under the program "Pedagogy, Education and Leadership." With over 15 years of teaching experience across various educational institutions, she has developed a robust foundation in academic instruction and research project management, contributing to both educational methodology and materials science.

Report Title: Experimental and numerical study of CO_2 adsorption onto activated carbon: adsorbent bed thickness effect

Presenter: Assilbekov Bakytzhan

Introduction: Bakytzhan K. Assilbekov is a distinguished scholar with a Ph.D. in fluid and gas mechanics from Al-Farabi Kazakh National University. He currently serves as Director of the Department of Science Projects and Programs at M. Auezov South Kazakhstan University and as a Leading Researcher at the "Institute of Ionosphere." With extensive academic and research experience, he has held key positions including Head of Research Laboratories at Satbayev University and Kazakh-British Technical University. His international exposure includes visiting researcher roles at Kyushu University (Japan) and short-term internships at the University of Pittsburgh (USA) and Cambridge University (UK). Proficient in Fortran, C++, and software like COMSOL Multiphysics and Eclipse, he combines strong computational skills with expertise in fluid dynamics.

Abstract: Assilbekov's research focuses on fluid and gas mechanics, with key interests in computational fluid dynamics, petroleum engineering, porous media flow, adsorption cooling systems, and hydraulic fracturing simulation. His achievements include authoring 5 monographs/tutorials and securing 6 copyright certificates for software (e.g., StimDesign, FlowAnalyser) used in reservoir simulation and pollutant modeling. He has published numerous journal articles and conference papers in prestigious outlets, covering topics such as CO_2 adsorption, latent heat energy storage, and rock dissolution. His work spans interdisciplinary applications, from petroleum reservoir analysis to ceramic molding processes, with significant contributions to understanding fluid flow in porous media and enhancing thermal energy storage systems.

报告题目：基于脱硫剂溶液设计与过程优化耦合的多尺度SO_2捕集性能调控研究

报 告 人：王东亮

兰州理工大学教授，博士生导师，石油化工学院副院长，甘肃能化股份有限公司独立董事、甘肃省低碳能源化工重点实验室副主任、甘肃省化学会化工专员委员会秘书长、甘肃省大学生化工设计竞赛委员会秘书长、酒泉市精细化工产业高质量发展咨询专家。主要从事化工过程模拟与系统集成、流体相平衡与分子热力学相关领域的研究，先后主持国家自然科学基金项目、甘肃省科技重大专项项目、甘肃省科技重点研发项目等课题10余项，以第一作者或通讯作者在Chemical engineering Journal 、Energy、Journal of Cleaner production、化工学报、化工进展等高水平期刊上发表论文50余篇。获得中国石油集团公司技术发明奖三等奖1项、中国石油和化工自动化行业协会技术进步奖二等奖1项。出版教材1部，指导本科生获全国大学生化工设计竞赛一等奖等2项，获甘肃省教学成果二等奖、甘肃省大学生化工设计竞赛优秀指导教师等多项荣誉奖励。

Report Title： Innovation Breakthroughs and Engineering Demonstration of Carbon Capture Technology

Presenter： Xueqin Li

Brief Introduction: Professor and doctoral supervisor at the College of Chemistry and Chemical Engineering, Shihezi University. She has been selected into the "Corps Talents" program, recognized as a "Leading Young and Middle-aged Scientific and Technological Innovator of the Corps", and appointed as a "3152 Discipline Leader" and "Outstanding Young and Middle-aged Key Teacher" of Shihezi University. Her research focuses on separation membrane materials and membrane processes. She has presided over 2 National Natural Science Foundation projects and 3 provincial-level projects of the Corps. She has published over 70 papers in journals such as *Chemical Reviews, Advanced Functional Materials, and Journal of Membrane Science*, and holds 18 authorized Chinese invention patents. She has won 1 first prize of the Corps Science and Technology Award (ranked 3rd), 1 second prize of the Corps Natural Science Award (ranked 2nd), and 1 second prize of the Undergraduate Teaching Achievement Award of Shihezi University (ranked 1st). She has guided students to win 8 national awards in competitions such as "Challenge Cup" and "Internet Plus".

Abstract: Focusing on the needs of the "dual-carbon" strategy and industrial emission reduction, this research addresses the core bottlenecks of high energy consumption and low efficiency in traditional carbon capture technologies, constructing a full-chain system covering "fundamentals—technology—application". At the fundamental level, an innovative local electric field regulation strategy is proposed, using MOFs/COFs functional fillers to construct mixed matrix membranes with "charge sieving—affinity capture—continuous transport" functions, breaking the "tradeoff" constraint in membrane separation and exceeding key industrial indicators. At the technical level, cryogenic liquefaction technology is optimized, and a 100,000-ton-level liquefaction process adapted to high-concentration gas sources is developed. At the application level, a 200,000-ton/year demonstration project has been completed, filling the gap in the Corps region and providing theoretical and technical support for industrial green transformation and the achievement of "dual-carbon" goals.

报告题目：碳捕集技术创新突破与工程示范

报　告　人：李雪琴

简介：石河子大学化学化工学院教授，博士生导师，入选兵团英才，兵团中青年科技创新领军人才，石河子大学 3152 学科带头人，石河子大学优秀中青年骨干教师；从事分离膜材料与膜过程的研究，主持国家自然科学基金项目 2 项、兵团省级项目 3 项，在 Chemical Reviews、Advanced Functional Materials 和 Journal of Membrane Science 等期刊发表 70 余篇论文，授权中国发明专利 18 件。获兵团科学技术奖一等奖 1 项（排名第三），兵团自然科学奖二等奖 1 项（排名第二），石河子大学本科教学成果奖校级二等奖 1 项（排名第一），指导学生参加“挑战杯”、“互联网+”等获国家级奖 8 项。

简介内容：聚焦“双碳”战略与工业减排需求，研究针对传统碳捕集能耗高、效率低的核心瓶颈，构建“基础—技术—应用”全链条体系。基础层面创新局域电场调控策略，以MOFs/COFs功能填充剂构建“电荷筛分—亲和捕获—连续传递”混合基质膜，破解膜分离“tradeoff”制约并突破工业核心指标。技术层面优化低温液化技术，研发了适配高浓度气源的10万吨级液化工艺。应用层面建成2×10万吨/年示范工程，填补了兵团区域空白，为行业绿色转型及“双碳”目标落地提供理论与技术支撑。

Report Title: Unlocking Alkaline Water Splitting at Ampere-Level Current Densities: The Role of Oxidation Pathway Mechanism
Presenter: Fuxi Bao

Introduction: Dr. Fuxi Bao is currently an Associate Professor in the School of Chemistry and Chemical Engineering at Shihezi University. In February 2018, he received full funding from Germany to pursue his doctoral studies, earning his PhD in Natural Sciences from the Technical University Berlin/Helmholtz-Zentrum Berlin für Materialien und Energie in August 2021. He officially joined Shihezi University in April 2022. His research currently focuses on electrochemical energy storage and conversion, including water splitting, biomass upgrading, and aqueous secondary batteries. Since joining Shihezi University in 2022, Dr Bao has published 16 SCI papers (as corresponding author) in leading journals such as Angewandte Chemie International Edition, Applied Catalysis B: Environment and Energy, Renewable Energy, Journal of Colloid and Interface Science, Separation and Purification Technology, Fuel, and International Journal of Hydrogen Energy. In early 2023, he was selected for the National Overseas High-level Talent Programme.

四、参会人员名单
IV. List of Participants

特邀专家
Distinguished Invited Experts

序号	姓　名	单位	职务
1	Ishak Ahmad	Universiti Kebangsaan Malaysia	Professor
2	Manyakhin Artem	Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of the Russian Academy of Sciences, 690022 Vladivostok, Russia	Professor
3	Saima Perveen	Xi'an Jiaotong University	副教授、国家自然科学基金委外国优秀青年学者
4	Zhang Lili	Agency for Science, Technology and Research (A*STAR)	Division Director/Dr.
5	Brenda Cecilia Alcántar Vázquez	Instituto de Ingeniería, UNAM	研究员
6	Poh Chee Kok	Agency for Science, Technology and Research (A*STAR)	Deputy Division Director/Dr
7	朱晓夏	北京师范大学（珠海校区）	教授
8	Raul D. Rodriguez	Tomsk Polytechnic University	Full Professor
9	Evgeniya Sheremet	Tomsk Polytechnic University	Professor
10	Mominova Saule	M. Auezov South Kazakhstan University	Senior Lecturer, PhD
11	Azimov Abdugani Mutalovich	M. Auezov South Kazakhstan University	Chief researcher at a Laboratory of “Innovative Water Purification Systems”, PhD

12	Smailov Bakyt	M. Auezov South Kazakhstan University	Head of department of commercialization and entrepreneurship, PhD
13	Assilbekov Bakytzhan	M. Auezov South Kazakhstan University	Head of Science Department, PhD
14	Kuo-Wei Huang	King Abdullah University of Science and Technology	Professor
15	戴伟民	香港科技大学	教授、长江学者
16	童荣标	香港科技大学	教授
17	邝福儿	香港中文大学	教授
18	Tiancun Xiao	Department of Chemistry, University of Oxford	Senior Research Fellow
19	Hai Yu	Common wealth Scientific and Industrial Research Organisation, Australia	Principal Research Scientist and Project Leader
20	王考进	北京师范大学	研究员
21	杨贵东	西安交通大学	化学工程与技术学院院长
22	余云松	西安交通大学	化学工程与技术学院副院长
23	Ajmal Khan	西安交通大学	特聘研究员
24	仝建波	陕西科技大学	院长/教授
25	刘淑玲	陕西科技大学	教授
26	周继升	塔里木大学/北京化工大学	院长（援疆）/教授
27	徐壮	新疆工程学院	化工系副主任/副教授
28	曹玲	昌吉学院	化学与化工学院院长/教授
29	武占省	西安工程大学	环境与化学工程学院院长
30	王周君	宁夏大学/北京化工大学	青年长江学者/教授

31	田维亮	塔里木大学	化学化工学院副院长
32	杨文静	新疆工程学院	化学与环境工程学院院长
33	刘晨江	新疆师范大学	副校长
34	华瑞茂	新疆大学	化学学院院长
35	刘岸杰	新疆大学	化工学院党委书记
36	戚小强	喀什大学	化学与环境工程学院书记
37	梁永民	兰州大学	化学化工学院院长
38	张宝亮	西北工业大学	化学与化工学院副院长
39	王东亮	兰州理工大学	副院长/教授
40	王景霞	西北工业大学	化学实验教学中心副主任/副教授

参会专家
Participating Experts

序号	姓　名	单位	职务
1	Craig Day	University of Copenhagen	Associate Professor
2	Krzysztof Kuciński	Adam Mickiewicz University in Poznan	Associate Professor
3	ChongChien Hwa	University of Nottingham Malaysia	Associate Professor
4	Zair Tairovich Ibragimov	Al-Farabi Kazakh National University	Researcher
5	Berganayeva Gulzat	Al-Farabi Kazakh National University	Associate Professor
6	Aruzhan Kenessova	Al-Farabi Kazakh National University	PhD student
7	Bakhytzhan Yeldana	Al-Farabi Kazakh National University	Researcher
8	Renat Beissenov	Kazakh-British Technical University	Associate professor, Dean, The school of chemical Engineering
9	Mukhtar Yeleuov	Satbayev National Technical University	Dr.Senior Researcher
10	贾永光	北京师范大学	副教授
11	张猛	北京师范大学	讲师
12	王瑞莉	东华大学	副研究员
13	马志远	东华大学	讲师
14	钱安	华东理工大学	博士生
15	马玉玲	华东理工大学	博士生
16	Tariq Mahmood	Northwestern Polytechnical University, Xian	Research fellow

17	舒程勇	西安交通大学	副教授
18			
19			
20			
21			
22			
23			
24			

石河子大学参会人员
Participants from Shihezi University

序号	姓　名	单位	职务
1	徐善东	石河子大学	党委书记
2	李兆敏	石河子大学	校长
3	贾　鑫	石河子大学	化学化工学院党委书记
4	刘纪昌	石河子大学	化学化工学院院长
5	刘　平	石河子大学	化学化工学院副院长
6	于　锋	石河子大学	化学化工学院副院长
7	李洪玲	石河子大学	化学化工学院副院长
8	李永生	石河子大学	教授
9	雷志刚	石河子大学	教授
10	陈秀荣	石河子大学	教授
11	范建华	石河子大学	教授
12	郭　勇	石河子大学	教授
13	张海洋	石河子大学	教授
14	李雪琴	石河子大学	教授
15	徐　亮	石河子大学	教授
16	包福喜	石河子大学	副教授
17	刘琨	石河子大学	博士/硕士研究生
18	王兴翔	石河子大学	博士/硕士研究生
19	孙亚鑫	石河子大学	博士/硕士研究生
20	杨振	石河子大学	博士/硕士研究生
21	崔丹	石河子大学	博士/硕士研究生
22	李程程	石河子大学	博士/硕士研究生
23	杨硕	石河子大学	博士/硕士研究生

24	周永博	石河子大学	博士/硕士研究生
25	吕晓雄	石河子大学	博士/硕士研究生
26	吴培涵	石河子大学	博士/硕士研究生
27	张潇予	石河子大学	博士/硕士研究生
28	毛旭冉	石河子大学	博士/硕士研究生
29	龙鹏飞	石河子大学	博士/硕士研究生
30	肖金凤	石河子大学	博士/硕士研究生
31	李雄	石河子大学	博士/硕士研究生
32	魏奋	石河子大学	博士/硕士研究生
33	刘浩	石河子大学	博士/硕士研究生
34	任豪毅	石河子大学	博士/硕士研究生
35	蒋雯雯	石河子大学	博士/硕士研究生
36	张启超	石河子大学	博士/硕士研究生
37	刘翠翠	石河子大学	博士/硕士研究生
38	罗玉萍	石河子大学	博士/硕士研究生

五、主办单位简介

V. Introduction to the Organizing Institution

1. 石河子大学简介

【历史沿革】

前身为 1949 年创办的中国人民解放军第一兵团卫生学校（后发展为石河子医学院）。1996 年，石河子医学院、农学院、兵团经济专科学校及师范专科学校合并成立石河子大学。2000 年入选国家西部大开发重点建设高校；2008 年成为国家“211 工程”重点建设高校；2017 年、2022 年两度入选国家“双一流”建设高校；2018 年获教育部与新疆兵团“部省合建”支持。

【办学定位】

学校完整准确全面贯彻新时代党的治疆方略，牢牢扭住社会稳定和长治久安总目标，始终坚持“立足兵团、服务新疆、面向全国、辐射中亚”的办学定位和“以服务为宗旨，在贡献中发展”的办学理念，形成了“以兵团精神育人，为维稳戍边服务”的办学特色，成为教育戍边、科技强边、文化固边的重要力量。目前，石河子大学正朝着建设西部一流、国际知名的有特色高水平大学目标迈进。

【学科专业】

学校现有经济学、法学、教育学、文学、历史学、理学、工学、农学、医学、管理学、艺术学、交叉学科 12 大学科门类。

学校有 99 个本科专业（招生专业 90 个）（28 个国家一流专业建设点、20 个省级一流专业建设点）、13 个一级学科博士学位授权点（应用经济学、生物学、化学、机械工程、化学工程与技术、农业工程、食品科学与工程、作物学、园艺学、畜牧学、基础医学、药学、工商管理学）、2 个博士专业学位授权点（机械、土木水利）、32 个一级学科硕士学位授权点、36 个硕士专业学位授权点。8 个博士后科研流动站、2 个博士后科研工作站。现有国家一流建设学科 1 个（化学工程与技术）、国家重点学科 1 个（作物栽培学与耕作学）、部省合建学科群 2 个（化学工程与技术、农业工程），兵团重点学科 15 个。临床医学、农业科学、化学、植物与动物科学、工程学、材料科学、环境/生态学、药理学

与毒理学 8 个学科进入 ESI 全球前 1%。

【科学研究】

学校紧密围绕国家战略和区域重大需求，深入实施创新驱动发展战略，以深化科研体制机制改革为动力，强化基础研究和应用研究，促进科技成果转化，发挥大综合、强应用的学科优势，坚持产学研一体化道路，在“化工绿色工艺及新型材料技术、荒漠绿洲区高效农业与生态、动物遗传改良与疾病控制、新疆地方与民族高发病防治、新疆特色农业生产机械化技术与装备”等具有区位优势和特色的研究领域取得了突破性进展。

近五年来，学校主动承担国家、兵团重大科研任务，立项各级各类项目 2703 项，科研总经费近 10.53 亿元。获省部级以上奖励 32 项，获授权有效专利 1424 件，以技术转让、技术开发等形式实施知识产权成果转化 40 件，技术交易额 4900 余万元。获教育部高等学校科学研究优秀成果奖（人文社会科学）三等奖 2 项，36 项成果获得自治区哲学社会优秀成果奖，其中一等奖 5 项、二等奖 4 项、三等奖 8 项、优秀奖 19 项，获奖数居新疆高校前列。

【人才培养】

学校面向全国 31 个省（市、区）招生，现有在校学生 32721 人，其中普通本科生 23229 人、普通专科生 516 人，硕士、博士研究生 8493 人，留学生 483 人。有国家一流本科课程 18 门，省级一流本科课程 75 门。有国家级教学团队 3 个，国家级教学名师 2 人。作为第一完成单位获国家级教学成果二等奖 5 项，作为参与单位获国家级教学成果一等奖 1 项、二等奖 3 项。获批国家级实验教学示范中心 1 个，教育部第二批虚拟教研室建设试点项目 2 个。2 门本科课程及其课程团队获评教育部课程思政示范课程、课程思政教学名师和团队，33 门课程获批省级课程思政示范课，马克思主义学院入选全国重点培育单位。学校是国家级创新创业教育实践基地建设单位，学生获中国国际大学生创新大赛金奖 5 项、“挑战杯”全国大学生课外学术科技作品竞赛一等奖 4 项、世界学生围棋王座战冠军 1 项。学校是教育部卓越（医生、工程师、农林人才）教育培养计划项目试点高校，设有 6 个卓越人才培养计划项目试点专业。

【师资队伍】

学校现有教职工 2803 人，专任教师 2080 人（教授 424 人、副教授 841 人）。现有中国工程院院士 4 人，入选国家人才项目 45 人次，国务院特贴专家

78 人，全国高校黄大年式教师团队 2 个，自治区、兵团级人才 370 人。

2. 西安交通大学简介

西安交通大学（Xi'an Jiaotong University）是中华人民共和国教育部直属的综合性研究型全国重点大学，位列国家"双一流"（A 类）、"985 工程""211 工程"重点建设高校，是中国最早兴办的高等学府之一，也是中国 C9 联盟（九校联盟）成员，在国内外享有盛誉。

【历史沿革】

西安交通大学前身为 1896 年创办于上海的"南洋公学"，是中国近代教育史上最早的国立大学之一。1956 年，为响应国家战略布局，交通大学主体从上海迁至西安，1959 年定名为西安交通大学。此次西迁被誉为中国高等教育史上的"伟大壮举"，"西迁精神"成为学校的精神内核。2000 年，西安交通大学与原西安医科大学、陕西财经学院合并，进一步拓展了学科领域。

【学科建设】

学校以工科见长，涵盖理、工、医、经、管、文、法、哲、艺术等学科门类。拥有 8 个"双一流"建设学科（如动力工程及工程热物理、电气工程、机械工程等），16 个国家重点学科。在教育部学科评估中，多个工科专业位列全国前列；QS、THE 等国际榜单中，工程与技术学科稳居全球百强。

【科研实力】

拥有 5 个国家重点实验室、7 个国家工程（技术）研究中心，以及多个省部级重点实验室。在能源动力、电气工程、人工智能、高端制造、生物医学等领域取得突破性成果，多次获国家自然科学奖、技术发明奖和科技进步奖。2019 年启用的中国西部科技创新港，定位为"国家使命担当、全球科教高地"，推动产学研深度融合。

【师资力量】

拥有两院院士、国家级教学名师、长江学者等顶尖学者，师资力量雄厚。与哈佛大学、牛津大学等全球 150 余所高校建立合作关系，推动国际联合科研与人才培养。

【校园文化】

校训：“精勤求学、敦笃励志、果毅力行、忠恕任事”，传承百年办学理念。

校园内有“钱学森图书馆”“西迁纪念馆”等标志性建筑，弘扬爱国奋斗精神。注重创新能力与实践能力，学生在全国创新创业大赛、学科竞赛中屡获佳绩。

【社会贡献】

培养了钱学森、张光斗、侯宗濂等一大批杰出校友，为国家发展输送了逾30万人才。深度参与西部大开发、“一带一路”建设，在新能源、医疗健康、智能制造等领域提供技术支撑。

【国际声誉】

在2024年QS世界大学排名中位列全球第291位，泰晤士高等教育（THE）世界大学排名中进入全球前400强。入选国家“珠峰计划”“强基计划”，被誉为“东方MIT”。

西安交通大学始终以“扎根西部、服务国家、世界一流”为使命，是推动中国高等教育和科技创新的重要力量。

六、会议记录
VI. Conference Minutes

七、温馨提示

VII. Important Notes

天气篇/ Weather Guidelines

新疆属温带大陆性气候，冬寒夏暑，干旱少雨，昼夜温差显著；7-8月气温介于18℃～35℃之间，请及时增减衣物以应对温度变化。

Xinjiang features a temperate continental climate with cold winters, hot summers, scarce rainfall, and significant diurnal temperature variations. During July-August, temperatures range from 18 °C to 35 °C. Please adjust clothing promptly in response to temperature changes.

餐饮篇/Cuisine Precautions

新疆素有"瓜果之乡"美誉，但品尝瓜果后请勿立即饮用热茶，以免引发肠胃不适。本地饮食风味浓郁，多偏咸、辣、酸口，菜品常含辣椒、洋葱、西红柿、孜然及牛羊肉等食材；如有饮食禁忌请提前告知，我们将及时调整。另需注意：食用拌面（手工拉面）可免费加面，但额外加菜需付费。

Renowned as the "Hometown of Melons and Fruits," Xinjiang requires that hot tea not be consumed immediately after eating fresh fruits to prevent gastrointestinal discomfort. Local cuisine emphasizes robust flavors—predominantly salty, spicy, and sour—with common ingredients including chili peppers, onions, tomatoes, cumin, and beef/lamb. Notify us in advance of any dietary restrictions for accommodations. Note: Hand-pulled noodles (laghman) come with free noodle refills, but extra toppings incur additional charges.

会议篇/Conference Protocols

会议期间请随身携带会议材料。会务组将在每个环节结束后即时播报下一阶段活动的时间地点，助您高效衔接议程；为避免因环境不熟导致延误，请提前查阅会议日程及酒店导览资料。

Carry conference materials at all times during meetings. The organizing committee will announce the time and venue of each subsequent session immediately after every segment to facilitate seamless transitions. To avoid delays due to unfamiliarity with the venue, review the conference schedule and hotel guide materials beforehand.

健康篇/Health Essentials

当地属大陆性干旱气候，干燥少雨、日照充足且昼夜温差显著，请务必携带长袖外套、高倍防晒霜及物理防晒三件套（遮阳伞/太阳镜/宽檐帽），并随时补充矿泉水；若前往天池、喀纳斯湖或伊犁草原等景区需增备御寒衣物，酒店夜间空调请勿过低以防着凉。因紫外线强烈，建议每日补涂防晒并配备防暑药品（如夏桑菊冲剂）；另需准备常备药包（感冒药、肠胃药、润喉片）以应对水土不服。

The arid continental climate brings dry conditions, abundant sunshine, and sharp day-night temperature swings. Essential items include long-sleeved jackets, high-SPF sunscreen, physical sun protection gear (umbrella/sunglasses/wide-brimmed hat), and ample drinking water. When visiting Tianchi Lake, Kanas Lake, or Ili Grassland, pack cold-weather clothing. Avoid excessively low air conditioning at night to prevent chills. Due to intense UV radiation, reapply sunscreen daily and carry heat-relief remedies (e.g., Xiàsāngjú granules). Also prepare a medical kit (cold medicine, gastrointestinal drugs, throat lozenges) to counter acclimatization issues.

民俗特色篇/Cultural Etiquette

因地域辽阔，景点间距较远且行车时间长，途中常需步行或体验骑马乐趣，

建议穿着舒适防滑鞋以确保安全；本地为多民族聚居区，伊斯兰教为主要信仰，请尊重宗教习俗——避免提及猪肉话题，洗手后请用纸巾擦干而非甩手，与当地女性交流时男性请勿主动握手。此外，新疆与内地有2小时时差（作息参考：10:00上班/14:00午餐/19:00晚餐，日落约21:30），请及时调整作息安排以适应时差。

Vast distances between attractions entail long drives with frequent walking/horseback segments. Wear non-slip footwear for safety. As a multi-ethnic region dominated by Islamic faith, respect local customs: avoid pork-related topics, dry hands with paper towels (not by shaking), and refrain from initiating handshakes with local women. Note the 2-hour time difference from eastern China (schedule: 10:00 work start/14:00 lunch/19:00 dinner, sunset ~21:30); adjust your routine accordingly.

消费与安全篇/Shopping & Safety Protocols

购物消费时请确认商品细节与价格后再付款，选购物品建议由商户取拿；散装食品摊位可现场品尝但不可外带，敬请遵守。离疆前请务必核对机票（车次）信息及行李件数，出发前两小时复查随身物品以防遗漏，祝您旅途顺遂。

Verify product details and prices before payment. Allow vendors to handle merchandise when selecting goods. At food stalls, sampling is permitted but taking items away is prohibited—please comply. Before departure: reconfirm flight/train details and luggage count, double-check carry-on items two hours prior to leaving, and ensure no belongings are forgotten. We wish you safe travels.

会务篇/Conference Services

抵疆后若有特殊需求，请第一时间告知接站人员；如遇突发状况，请立即联系24小时会务组应急专员，并保持通讯畅通。

Upon arrival, report special needs immediately to your ground transfer staff. For emergencies, contact the 24-hour conference emergency liaison and keep communication channels accessible.