

Symposia - C02

Bio-inspired Materials

October 15 (Sunday), 2023

Conference Room: 7107, -1# floor

9:00-10:30 Session I

Chair: Qunfeng Cheng, Limin Qi

9:00-9:30 (C02-01)

Nanoarrays for electrocatalytic water splitting and solar energy conversion (Keynote)

Limin Qi, Peking University, China

9:30-10:00 (C02-02)

Bioinspired carbon-based nanocomposites (Keynote)

Qunfeng Cheng, Beihang University, China

10:00-10:30 (C02-03)

Bioinspired structural color materials (Keynote)

Mingzhu Li, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China

10:30-10:40 Coffee Break

10:40-11:30 Session II

Chair: Mingzhu Li, Jian Liu

10:40-11:05 (C02-04)

Bioinspired hydrophobic single-site catalysts (Invited)

Jian Liu, Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences, China

11:05-11:30 (C02-05)

Fine structure control of biological structural ceramics (Invited)

Libo Mao, University of Science and Technology of China, China

12:00-14:00 Lunch

14:00-15:15 Session III

Chair: Jiwei Cui, Yang Lu

14:00-14:25 (C02-06)

Circumvention of biological barriers for improved therapeutic delivery (Invited)

Jiwei Cui, Shandong University, China

14:25-14:50 (C02-07)

Bioinspired magnetic nanomaterial and its

applications in the MR diagnosis and therapy of cancer (Invited)

Yang Lu, Hefei University of Technology, China

14:50-15:15 (C02-08)

Delivery systems for mucosal mRNA vaccine (Invited)

Xueguang Lu, Institute of Chemistry, Chinese Academy of Sciences, China

15:15-15:25 Coffee break

15:25-17:10 Session IV

Chair: Yilun Ying, Jun Gao

15:25-15:50 (C02-09)

The asymmetric nanopore for single peptide analysis (Invited)

Yilun Ying, Nanjing University, China

15:50-16:15 (C02-10)

Ion sieving and osmotic power generation based on biomimetic ion channels with sub-nanometer pore size (Invited)

Jun Gao, Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences, China

16:15-16:40 (C02-11)

Heterostructured microparticles: From emulsion interfacial polymerization to separation (Invited)

Yongyang Song, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China

16:40-16:55 (C02-12)

Preparation of bioinspired multiscale structural materials through surface-groove-guided directional freezing (Oral)

Meng Li, Zhejiang University, China

16:55-17:10 (C02-13)

High thermal conductive nanocomposites by freeze-casting (Oral)

Nifang Zhao, Zhejiang University, China

17:50 Dinner

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October 16 (Monday), 2023

9:00-10:30 Session V

Chair: Hao Bai

9:00-9:30 (C02-14)

Bioinspired hydrogels and applications (Keynote)

Ximin He, University of California, Los Angeles, USA

9:30-10:00 (C02-15)

Pitcher-plant-inspired slippery surfaces: Forms and functions (Keynote)

Tak Sing Wong, Penn State University, USA

10:00-10:30 (C02-16)

Bioinspired process for making microstructured ceramic-reinforced composites (Keynote)

Hortense Le Ferrand & Lizhi Guan, Nanyang Technological University, Singapore

10:30-10:40 Coffee Break

10:40-11:30 Session VI

Chair: Han Zhou, Hao Bai

10:40-11:05 (C02-17)

Bioinspired macroporous materials (Invited)

Hao Bai, Zhejiang University, China

11:05-11:30 (C02-18)

Bioinspired thermal regulation materials (Invited)

Han Zhou, Shanghai Jiao Tong University, China

12:00-14:00 Lunch

14:00-15:15 Session VII

Chair: Renhao Dong, Xuemin Du

14:00-14:25 (C02-19)

Functional 2D framework materials via interfacial synthesis (Invited)

Renhao Dong, Shandong University, China

14:25-14:50 (C02-20)

Photocontrol of droplets on light-induced charged surfaces (Invited)

Xuemin Du, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China

14:50-15:15 (C02-21)

Bioinspired structured adhesives for various surfaces (Invited)

Longjian Xue, Wuhan University, China

15:15-15:25 Coffee break

15:25-16:20 Session VIII

Chair: Longjian Xue, Pengchao Zhang

15:25-15:50 (C02-22)

Superspreading-based fabrication of advanced polymer films (Invited)

Pengchao Zhang, Wuhan University of Technology, China

15:50-16:05 (C02-23)

Colonial sandcastle-inspired low-carbon building materials (Oral)

Xuetao Xu, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China

16:05-16:20 (C02-24)

Water spider-inspired nanofiber coating with sustainable scale repellency via air-replenishing strategy (Oral)

Yixuan Wang, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China

18:00 Dinner