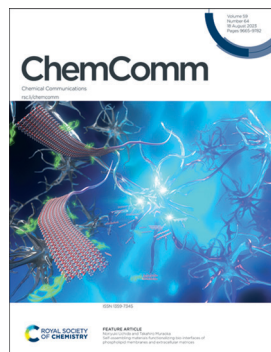


IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(64) 9665-9782 (2023)



Cover

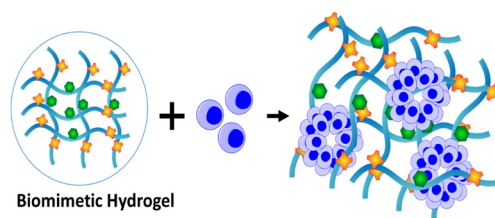
See Noriyuki Uchida and Takahiro Muraoka, pp. 9687-9697. Image reproduced by permission of Takahiro Muraoka from *Chem. Commun.*, 2023, 59, 9687.

HIGHLIGHT

9675

Advances in biomimetic hydrogels for organoid culture

Lili Luo, Libing Liu,* Yuxuan Ding, Yixuan Dong and Min Ma



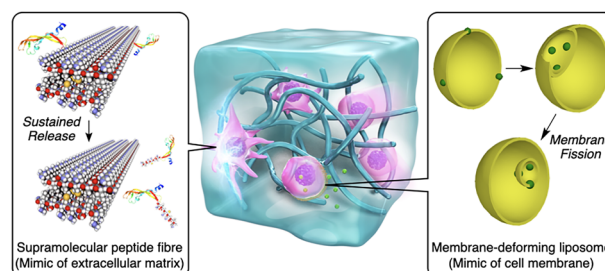
Scaffold of Biomimetic Hydrogel Cells Growth factor ECM—mimetic

FEATURE ARTICLE

9687

Self-assembling materials functionalizing bio-interfaces of phospholipid membranes and extracellular matrices

Noriyuki Uchida and Takahiro Muraoka*



Editorial Staff

Executive Editor

Richard Kelly

Deputy Editor

Harriet Riley

Editorial Production Manager

Helen Saxton

Development Editors

Danny Andrews, Ershad Abubacker

Senior Publishing Editor

Becky Webb

Publishing Editors

Kirstine Anderson, Matthew Bown, Laura Cooper, Hannah Fielding, Clare Fitzgerald, Anoushka Handa, Claire Harding, Alan Holder, Charlie Palmer, Rosie Rothwell, Donna Smith, Laura Smith

Editorial Assistant

Jade Holliday

Publishing Assistant

Natalie Ford

Publisher

Jeanne Andres

For queries about submitted papers, please contact Helen Saxton, Editorial Production Manager in the first instance. E-mail chemcomm@rsc.org

For pre-submission queries please contact Richard Kelly, Executive Editor.

Email chemcomm-rsc@rsc.org

Chemical Communications (print: ISSN 1359-7345; electronic: ISSN 1364-548X) is published 100 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to the Royal Society of Chemistry Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK

Tel +44 (0)1223 432398; E-mail orders@rsc.org

2023 Annual (electronic) subscription price: £3,553 / US\$6,258. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing to the electronic version only will be charged VAT.

If you take an institutional subscription to any Royal Society of Chemistry journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at www.rsc.org/ip

Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank.

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK, Telephone: +44 (0) 207 4378 6556.

Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017;

E-mail advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

ChemComm

Chemical Communications

rsc.li/chemcomm

Editorial Board

Chair

Douglas Stephan, University of Toronto

Associate Editors

Lutz Ackermann, University of Göttingen

Davide Bonifazi, University of Vienna

Rachel Caruso, RMIT University

Fengtao Fan, Chinese Academy of Sciences

Itaru Hamachi, Kyoto University

Michael Hardie, University of Leeds

Kim Jelfs, Imperial College London

Chao-Jun Li, McGill University

David Lou, City University of Hong Kong

Connie Lu, University of Minnesota, US

Marinella Mazzanti, EPFL, Switzerland

Amy Prieto, Colorado State University

Yang Tian, East China Normal University

Sandeep Verma, Indian Institute of

Technology Kanpur

Advisory Board

Brendan Abrahams, University of Melbourne

Polly Arnold, University of Edinburgh

Louise Berben, University of California, Davis

Penny Brothers, Australian National University

Wesley Browne, University of Groningen

Raffaella Buonsanti, EPFL

Luiz Henrique Catalani, University of São Paulo

Xiao-Ming Chen, Sun Yat-Sen University

Lifeng Chi, Soochow University

Arindam Chowdhury, Indian Institute of

Technology Bombay

Derrick Clive, University of Alberta

Seth Cohen, University of California, San Diego

Marcetta Darensbourg, Texas A&M University

Jyotirmayee Dash, Indian Association for the

Cultivation of Science

Gautam R. Desiraju, Indian Institute of

Science, Bangalore

Abhishek Dey, Indian Association for the

Cultivation of Science (IACS)

Josh Figueroa, University of California, San

Diego

Lutz Gade, University of Heidelberg

Sujit Ghosh, Indian Institute of Science

Education of Research, India

Nathan Gianneschi, University of California,

San Diego

Robert Gilliard Jr., University of Virginia

David Gonzalez-Rodriguez, Autonomous

University of Madrid

Rebecca Goss, University of

St Andrews

Mike Greaney, University of Manchester

Shaojun Guo, Peking University

Michael Hardie, University of Leeds

Amanda Hargrove, Duke University

Craig Hawker, University of California, Santa

Barbara

Feihe Huang, Zhejiang University

Todd Hudnall, Texas State University

Ilich A. Ibarra Alvarado, National University

of Mexico

Hiroshi Kageyama, Kyoto University

Jong Seung Kim, Korea University

Shu Kobayashi, University of Tokyo

Mi Hee Lim, Ulsan National Institute of

Science and Technology (UNIST)

Teck-Peng Loh, Nanyang

Technological University

Tien-Yau Luh, National Taiwan University

Doug MacFarlane, Monash University

Hiromitsu Maeda, Ritsumeikan University

Silvia Marchesan, University of Trieste

Nazario Martin, Complutense University of

Madrid

Keiji Maruoka, Kyoto University

Alexander Miller, University of North Carolina

at Chapel Hill

Wonwoo Nam, Ewha Womans University

Jean-Francois Nierengarten, University of

Strasbourg

Thalappil Pradeep, Indian Institute of

Technology Madras

S Ramakrishnan, Indian Institute of Science

Erwin Reisner, University of Cambridge

Robin Rogers, McGill University

Paolo Samori, University of Strasbourg

Ellen Sletten, University of California, Los

Angeles

David Smith, University of York

Mizuki Tada, Nagoya University

Christine Thomas, Ohio State University

Zhong-Qun Tian, Xiamen University

Tomas Torres, Autonomous University of

Madrid

Helma Wennemers, ETH Zurich

Judy Wu, University of Houston

Yi Xie, University of Science and Technology

of China

Xianran Xing, University of Science and

Technology Beijing

Shuli You, Shanghai Institute of Organic

Chemistry, Chinese Academy of Sciences

Atsuo Yamada, University of Tokyo

Qiang Zhang, Tsinghua University

Xi Zhang, Tsinghua University

Wenwan Zhong, University of California,

Riverside

Eli Zysman-Colman, University of St. Andrews

Information for Authors

Full details on how to submit material for publication in Chemical Communications are given in the Instructions for Authors (available from <http://www.rsc.org/authors>).

Submissions should be made via the journal's homepage:

rsc.li/chemcomm

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of the Royal Society of Chemistry.

This journal is © The Royal Society of Chemistry 2023.

Apart from fair dealing for the purposes of research or private study

for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA.

© The paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

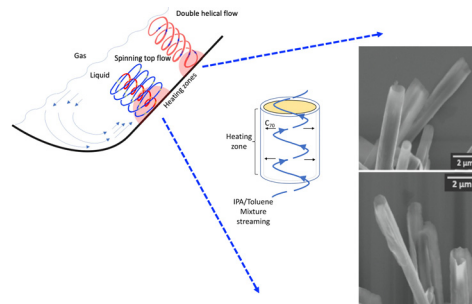
Registered charity number: 207890



9698

Vortex fluidic high shear induced crystallisation of fullerene C₇₀ into nanotubes

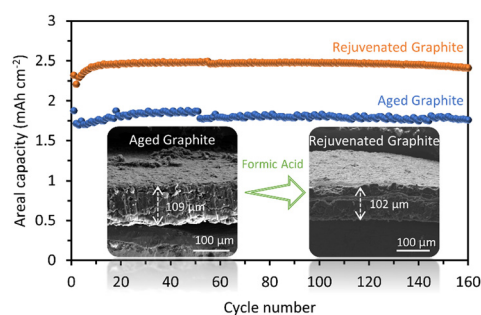
Kasturi Vimalanathan,* Zhi Zhang, Jin Zou and Colin L. Raston



9702

Rejuvenation of aged graphite anodes from spent lithium-ion batteries via a facile surface treatment strategy

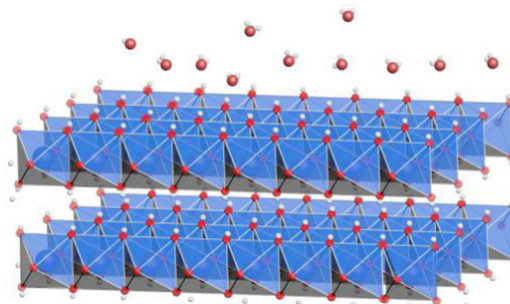
Jintao Zhang, Xuesong Yin, Wanwan Wang, Nguk Neng Tham, Zhenxiang Xing, Song Lin Zhang, Xiaowei Wang and Zhaolin Liu*



9706

Bimetallic Zn/Co telluride spinel with enhanced metal–tellurium covalency for efficient water oxidation

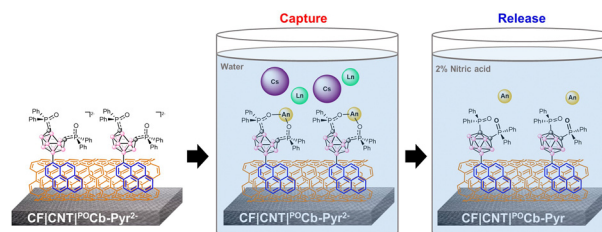
Shuowen Bo, Qizheng An, Yu Zhu, Xiuxiu Zhang, Yuhao Zhang, Hui-Juan Wang, Juguang Han, Hui Su* and Qinghua Liu*



9710

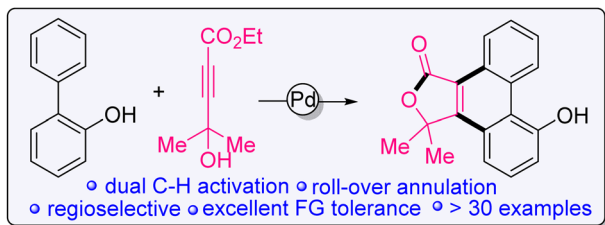
Selective heterogeneous capture and release of actinides using carborane-functionalized electrodes

Maxwell Mattejat and Gabriel Ménard*



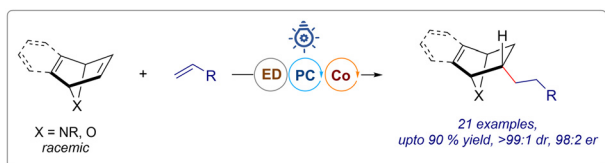
COMMUNICATIONS

9714


Pd-catalyzed regioselective rollover dual C–H annulation cascade: facile approach to phenanthrene derivatives

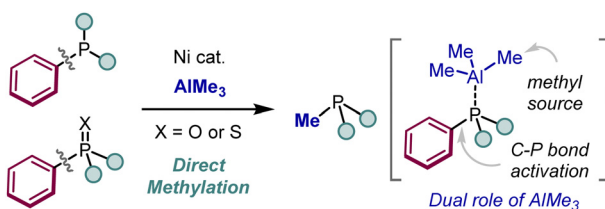
Muniganti Naveen Kumar, Vavilapalli Suresh, Attunuri Nagireddy, Jagadeesh Babu Nanubolu and Maddi Sridhar Reddy*

9718


Asymmetric alkene–alkene reductive cross-coupling reaction via visible-light photoredox/cobalt dual catalysis

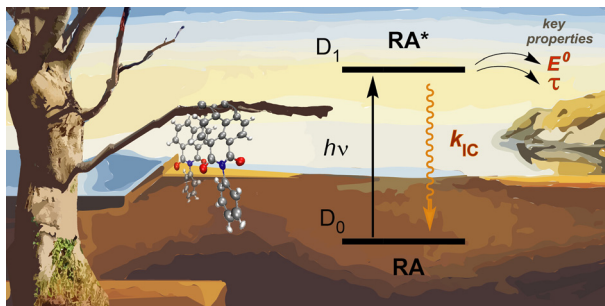
Mamata Maiti, Sayan K. Jana and Biplab Maji*

9722


Nickel-catalyzed direct methylation of arylphosphines via carbon–phosphorus bond cleavage using AlMe₃

Takuya Igarashi, Ryoma Shimazumi, Naoto Chatani and Mamoru Tobisu*

9726


Quantitative prediction of excited-state decay rates for radical anion photocatalysts

Leandro D. Mena, José L. Borioni, Sofia Caby, Patrick Enders, Miguel A. Argüello Cordero, Franziska Fennel, Robert Francke, Stefan Lochbrunner and Javier I. Bardagi*

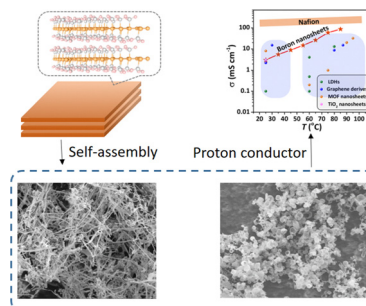


COMMUNICATIONS

9730

Surface-functionalized boron nanosheets and their assembled suprastructures with unprecedented proton-transport properties

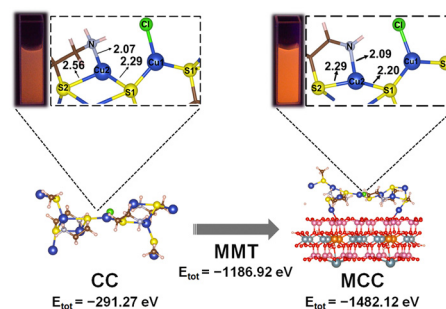
Hongfeng Zhan, Mengwei Dong, Shengchuang Qiu, Xiaoshan Wang, Lingfeng Chao, Zhendong Huang, Yonghua Chen, Hai Li, Xiao Huang* and Shaozhou Li*



9734

Nanoclay-modulated copper cysteamine composites for enhanced fluorescence

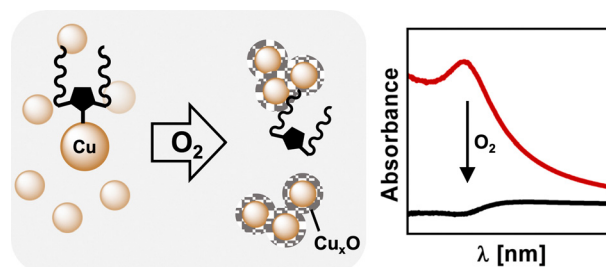
Qianqian Liu, Hao Wang, Xiaozheng Liang, Yili Tang and Huaming Yang*



9738

NHC stabilized copper nanoparticles via reduction of a copper NHC complex

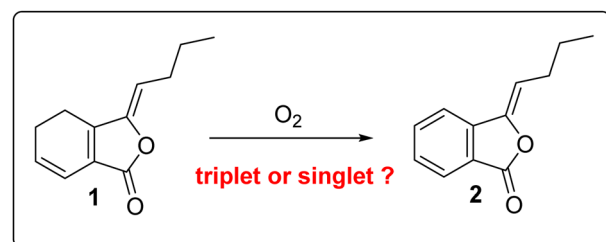
Robert Richstein, Constantin Eisen, Lingcong Ge, Monnaya Chalermnon, Florian Mayer, Bernhard K. Keppler, Jia Min Chin* and Michael R. Reithofer*



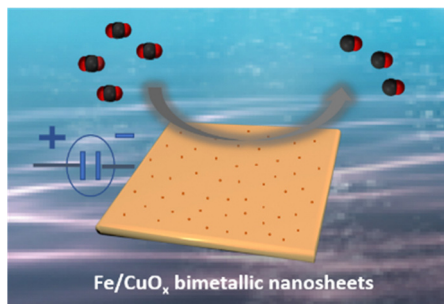
9742

Oxidative aromatization mechanism of ligustilide

Yu-Qing Zhuang, Jian Zou, Sheng-Yuan Zhang, Jia-Ming Wu, Liang Long, Xian-Bo Chen, Guo-Dong Chen, Dan Hu, Yong-Heng Wang* and Hao Gao*



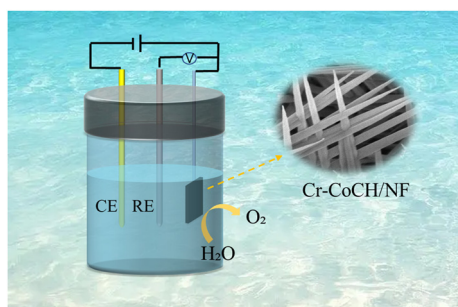
9746



Selectivity control for CO₂ electroreduction to syngas using Fe/CuO_x catalysts with high current density

Hui Liu, Enting Shi, Weiwei Guo,* Zhaoyang Sun, Zijian Fang, Zhijun Zhu,* Lei Jiao, Yanling Zhai* and Xiaoquan Lu*

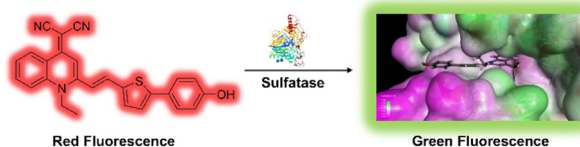
9750



Chromium doping enabled improvement in alkaline seawater oxidation over cobalt carbonate hydroxide nanowire array

Min Zhang, Xun He, Kai Dong, Hui Zhang, Yongchao Yao, Chaoxin Yang, Meng Yue, Shengjun Sun, Yuntong Sun, Dongdong Zheng, Yongsong Luo, Qian Liu, Na Li, Bo Tang, Jun Liu* and Xuping Sun*

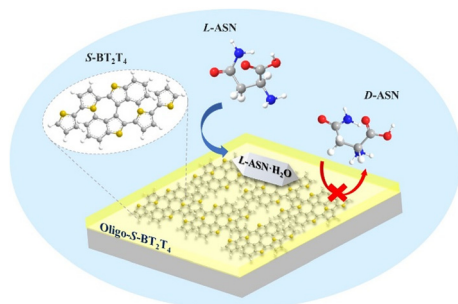
9754



Real-time visualization of sulfatase in living cells and *in vivo* with a ratiometric AIE fluorescent probe

Yanli Chen, Wenhui Shi, Yanqi Xu and Peng Wang*

9758



Enantioselective resolution of two model amino acids using inherently chiral oligomer films with uncorrelated molecular structures

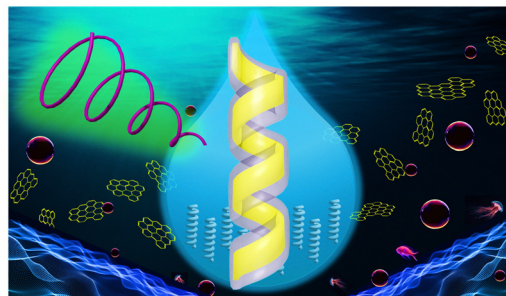
Thitapond Nulek, Serena Arnaboldi, Gerardo Salinas, Giorgia Bonetti, Roberto Cirilli, Tiziana Benincori, Chularat Wattanakit, Adrian E. Flood* and Alexander Kuhn*



9762

Sequential chiral induction between organic and inorganic supramolecular helical assemblies for the *in situ* formation of chiral carbon dots

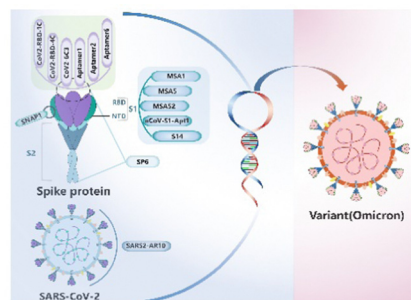
Piyanan Pranee, Antoine Scalabre, Christine Labrugere, Naoya Ryu, Akira Yano, Nanami Hano, David Talaga, Yutaka Okazaki, Emilie Pouget, Sylvain Nlate, Sébastien Bonhommeau, Makoto Takafuji, Takehiko Wada, Hirotaka Ihara, Thierry Buffeteau, Dario M. Bassani* and Reiko Oda*



9766

Diverse SARS-CoV-2 aptamers overcome variant antigenic shift

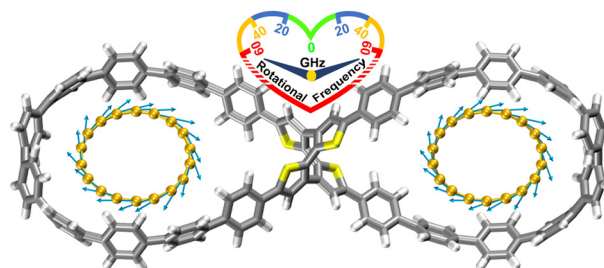
Yihao Huang, Jialu Zhang, Wencheng Wang, Chaoyong Yang and Yanling Song*



9770

Theoretical design of a dual-motor nanorotator composed of all-carboatomic cyclo[18]carbon and a figure-of-eight carbon hoop

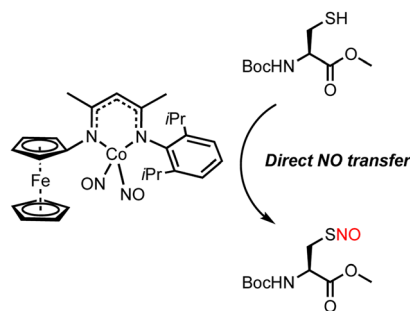
Zeyu Liu,* Xia Wang, Tian Lu,* Xiufen Yan, Jiaojiao Wang, Yang Wu, Jingbo Xu and Zhibo Xie



9774

Promotion of *S*-nitrosation of cysteine by a {Co(NO)₂}¹⁰ complex

Chien-Wei Chiang,* Kai-Wun Jhang, Jeng-Lung Chen, Liang-Ching Hsu, Wei-Hsiang Huang, Hung-Chi Chen, Ting-Jun Lin, Ci-Yang Sun and Yu-Ning Li



CORRECTION

9778

Correction: Catalytically active designer crown-jewel Pd-based nanostructures encapsulated in metal–organic frameworks

Liyu Chen, Weihao Huang, Xiujun Wang, Zhijie Chen, Xianfeng Yang, Rafael Luque* and Yingwei Li*

