





(Abstracted/Indexed in: Chemical Abstracts; Chemical Engineering & Biotechnology Abstracts; Engineering Information Inc.; Science Citation Index;Theoretical Engineering Abstracts). Also covered in the abstract and citation database – SCOPUS®. Full text available on ScienceDirect®

# Special issue:

# "Perspectives on renewable carbon, CO<sub>2</sub> capture and valorization" Celebrating Professor Serge Kaliaguine's 83rd birthday

Guest Editor: Ying Zheng

# Contents

Preface for the special issue in honor of Professor Serge Kaliaguine Y. Zheng Cover Date: 1 April 2024, Volume 431 Emerging technologies in post-combustion carbon dioxide	114586	Z-scheme heterojunction of chemically integrated COF-366-Co/UiO-66-NH <sub>2</sub> MOFs nanocomposites for selective production of CO via CO <sub>2</sub> solar-drive photoreduction TA. Quach, V.N. Gopalakrishnan, J. Becerra, DT. Nguyen, J.M.E. Ahad, S. Mohan and TO. Do		
capture & removal S. Rezaei, A. Liu and P. Hovington Cover Date: 1 November 2023, Volume 423		Cover Date: 1 September 2023, Volume 421 Sulfosuccinic acid-based metal-center catalysts for the		
Synthesis of MOFs catalyst containing Cu(I) sites for CO <sub>2</sub> hydrogenation: Room-temperature controlled reduction via plasma reducing treatment strategy		synthesis of HMF from carbohydrates G.A.P. Perez, S. Pandey and MJ. Dumont Cover Date: 1 June 2023, Volume 418	114127	
N. Zou, T. Qiu and Y. Zheng Cover Date: 1 September 2023, Volume 421	114176	Transition metal carbide catalysts for Upgrading lignocellulosic biomass-derived oxygenates: A review of the experimental		
Recent advances in catalytic hydrogenation of CO <sub>2</sub> into value-added chemicals over oxide–zeolite bifunctional catalysts  X. Zhang, C. Yuan, Z. Huang, H. Xu and W. Shen Cover Date: 1 October 2023, Volume 422	114219	and computational investigations into structure-property relationships D. Akmach, S. Bathla, CC. Tran, S. Kaliaguine and S.H. Mushrif Cover Date: 1 November 2023, Volume 423	114285	
Silica-modulated Cu-ZnO-Al <sub>2</sub> O <sub>3</sub> catalyst for efficient hydrogenation of CO <sub>2</sub> to methanol H. Li, L. Wang and FS. Xiao Cover Date: 1 June 2023, Volume 418	114051	Production and applications of N-doped carbons from bioresources: A review K. Mainali, S.H. Mood, M.R. Pelaez-Samaniego, V. Sierra-Jimenez and M. Garcia-Perez		
Comparative analysis of electrolyzers for electrochemical carbon dioxide conversion G. Gao, C.A. Obasanjo, J. Crane and CT. Dinh Cover Date: 1 November 2023, Volume 423	114284	Cover Date: 1 November 2023, Volume 423 Isobutanol to isobutene: Processes and catalysts JL. Dubois, S. Segondy, G. Postole and A. Auroux Cover Date: 1 June 2023, Volume 418	114248 114126	
Electrode and cell design for CO <sub>2</sub> reduction: A viewpoint C. Ampelli, F. Tavella, D. Giusi, A.M. Ronsisvalle, S. Perathoner and G. Centi Cover Date: 1 September 2023, Volume 421	114217	One-step DMC synthesis from CO <sub>2</sub> under catalysis of ionic liquids prepared with 1,2-propylene glycol W. Wei, Y. Wang, Z. Yan, J. Hou, G. Xu and L. Shi Cover Date: 1 June 2023, Volume 418	114052	
Post-synthetic modification of Zr-MOFs using guanidine for cyclic carbonate formation catalysis S.M.M. Nataj, S. Kaliaguine and FG. Fontaine Cover Date: 1 October 2023, Volume 422	114216			



0920-5861(20240401)431:F1;1-U

The table of contents of Catalysis Today is included in ESTOC -Elsevier Tables of Contents service - which can be accessed on the World Wide Web at the following URL address: http:// www.elsevier.com/locate/estoc

2024 ISSN 0920-5861



Catalysis Today

(2024)



Special issue: "Perspectives on renewable carbon, CO<sub>2</sub> capture and valorization" Celebrating Professor Serge Kaliaguine's

83rd birthday

Guest Editor: Ying Zheng

**Journal Homepage:** www.elsevier.com/locate/cattod

ELSEVIER

Available online at www.sciencedirect.com

**ScienceDirect** 

#### Scope

Catalysis Today publishes Special Issues only. The Journal focuses on the rapid publication of *invited papers* devoted to currently important topics in catalysis and related subjects. It differs from conventional journals in that each issue is dedicated to a distinct topic, with issues either being prepared under the guidance of (a) guest editor(s) or as a monograph.

Both fundamental and applied aspects of catalysis are covered. While it is expected that many of the issues will be concerned with heterogeneous catalysis, subjects such as homogeneous catalysis and enzymatic catalysis will also be covered. Subjects related to catalysis such as techniques, adsorption, and process technology, etc. will be included if there is a clear relationship with catalysis.

The types of publication covered by Catalysis Today are:

Collections of review articles or original publications on a common theme.
 Monographs written by a single author or a group of authors covering a specific subject.

(3) Proceedings of short meetings (symposia, workshops, etc.).

The criteria for inclusion of papers, reviews or monographs are that a single topic is considered and that the contributions are original.

All possible contributions to *Catalysis Today* should first be discussed in detail with either the Editor or one of the Associate Editors. Authors who would like to prepare an issue should submit a draft proposal in which they indicate the title of the project, give a brief outline of the material which they intend to cover, and a break-down of the project into chapters or papers. For issues of type (1) and (3) mentioned above, it will be necessary to also provide a list of the proposed contributors and the expected titles of their papers.

As in conventional journals, a strict refereeing policy is applied. The publication of material in *Catalysis Today* that has appeared (or is likely to appear) elsewhere is discouraged. Submission of an article is understood to imply that the article is original and unpublished and is not being considered for publication elsewhere.

Publication information: Catalysis Today (ISSN 0920-5861). For 2024, volumes 425-442 (24 issues) are scheduled for publication. Subscription prices are available up on request from the Publisher or from the Elsevier Customer Service Department nearest you or from this journal's website (http://www.elsevier.com/locate/cattod). Further information is available on this journal and other Elsevier products through Elsevier's website: (http://www.elsevier.com). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

**Orders, claims, and journal inquiries:** please contact the Elsevier Customer Service Department nearest you:

St. Louis: Elsevier Customer Service Department, 3251 Riverport Lane, Maryland Heights, MO 63043, USA; phone: (877) 8397126 [toll free within the USA]; (+1) (314) 4478878 [outside the USA]; fax: (+1) (314) 4478077; e-mail: JournalCustomerService-usa@elsevier.com

Oxford: Elsevier Customer Service Department, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK; phone: (+44) (1865) 843434; fax: (+44) (1865) 843970; e-mail: JournalsCustomerServiceEMEA@elsevier.com

**Tokyo:** Elsevier Customer Service Department, 4F Higashi-Azabu, 1-Chome Bldg, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5037; fax: (+81) (3) 5561 5047; e-mail: JournalsCustomerServiceJapan@elsevier.com

**Singapore:** Elsevier Customer Service Department, 3 Killiney Road, #08-01Winsland House I, Singapore 239519; phone: (+65) 63490222; fax: (+65) 67331510; e-mail: JournalsCustomerServiceAPAC@elsevier.com

© 2024 Elsevier B.V.

This journal and the individual contributions contained in it are protected under copyright, and the following terms and conditions apply to their use in addition to the terms of any Creative Commons or other user license that has been applied by the publisher to an individual article:

## Photocopying

Single photocopies of single articles may be made for personal use as allowed by national copyright laws. Permission is not required for photocopying of articles published under the CC BY license nor for photocopying for non-commercial purposes in accordance with any other user license applied by the publisher. Permission of the publisher and payment of a fee is required for all other photocopying, including multiple or systematic copying, copying for advertising or promotional purposes, resale, and all forms of document delivery. Special rates are available for educational institutions that wish to make photocopies for non-profit educational classroom use.

### **Derivative Works**

Users may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions or companies. Other than for articles published under the CC BY license, permission of the publisher is required for resale or distribution outside the subscribing institution or company.

For any subscribed articles or articles published under a CC BY-NC-ND license, permission of the publisher is required for all other derivative works, including compilations and translations.

#### Storage or Usag

Except as outlined above or as set out in the relevant user license, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the publisher.

#### Permissions

For information on how to seek permission visit www.elsevier.com/permissions

#### Author rights

Author(s) may have additional rights in their articles as set out in their agreement with the publisher (more information at http://www.elsevier.com/authorsrights).

#### Notice

Practitioners and researchers must always rely on their own experience and knowledge in evaluating and using any information, methods, compounds or experiments described herein. Because of rapid advances in the medical sciences, in particular, independent verification of diagnoses and drug dosages should be made. To the fullest extent of the law, no responsibility is assumed by the publisher for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein.

Although all advertising material is expected to conform to ethical (medical) standards, inclusion in this publication does not constitute a guarantee or endorsement of the quality or value of such product or of the claims made of it by its manufacturer.

Advertising information: If you are interested in advertising or other commercial opportunities please e-mail Commercialsales@elsevier.com and your inquiry will be passed to the correct person who will respond to you within 48 hours.

**Funding body agreements and policies:** Elsevier has established agreements and developed policies to allow authors who publish in Elsevier journals to comply with potential manuscript archiving requirements as specified as conditions of their grant awards. To learn more about existing agreements and policies please visit http://www.elsevier.com/fundingbodies

#### Illustration services

Elsevier's WebShop (http://webshop.elsevier.com/illustrationservices) offers Illustration Services to authors preparing to submit a manuscript but concerned about the quality of the images accompanying their article. Elsevier's expert illustrators can produce scientific, technical and medical-style images, as well as a full range of charts, tables and graphs. Image 'polishing' is also available, where our illustrators take your image(s) and improve them to a professional standard. Please visit the website to find out more.

### **Author inquiries**

You can track your submitted article at http://www.elsevier.com/track-submission. You can track your accepted article at http://www.elsevier.com/trackarticle. You are also welcome to contact Customer Support via http://service.elsevier.com

Language (Usage and Editing services). Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop http://webshop.elsevier.com/languageediting/ or visit our customer support site http://service.elsevier.com for more information.

**Note:** Catalysis Today publishes Special Issues only. Therefore, only **INVITED** papers for Special Issues can be submitted to this journal. Please do NOT submit a paper if it is not part of a Special Issue.

Proofs. One set of proofs will be sent to the corresponding author, as indicated on the title page of the manuscript. Elsevier now also sends PDF proofs which can be annotated; for this you will need to download Adobe Reader version 7 available free from http://www.adobe.com/ products/acrobat/readstep2.html. Instructions on how to annotate PDF files will accompany the proofs. Only typesetter's errors may be corrected; no changes in, or additions to, the edited manuscript will be allowed

Offprints. The corresponding author, at no cost, will be provided with a PDF file of the article via e-mail. The PDF file is a watermarked version of the published article and includes a cover sheet with the journal cover image and a disclaimer outlining the terms and conditions of use. Additional paper offprints can be ordered by the authors. An order form with prices will be sent to the corresponding author.

Printed by Henry Ling Ltd, The Dorset Press, Dorchester, UK

 The paper used in this publication meets the requirements of ANSI/ NISOZ39.48-1992 (Permanence of Paper)

For a full and complete Guide for Authors, please go to http://www.elsevier.com/locate/cattod