

# **World Conference on Carbon (Carbon 2023)**

Renewing the World Through Carbon

Cancun, Mexico  
16 – 21 July 2023

Volume 1 of 2

ISBN: 978-1-7138-8011-0

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2023) by American Carbon Society  
All rights reserved.

Printed with permission by Curran Associates, Inc. (2024)

For permission requests, please contact American Carbon Society  
at the address below.

American Carbon Society  
c/o Dr. Matthew Weisenberger, Secretary-Treasurer  
University of Kentucky Center for Applied  
Energy Research  
2540 Research Park Drive  
Lexington, KY 40511  
USA

Phone: +1 (859) 257-0322  
Fax: +1 (859) 257-0220

[matt.weisenberger@uky.edu](mailto:matt.weisenberger@uky.edu)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## EXTENDED ABSTRACT INDEX



The Extended Abstracts were sorted by topic, then by submission ID

Topic	Page
1. Carbon in biology, medicine, and health	1
2. Carbon in environmental applications	48
3. Carbon in electrochemical processes and technologies	467
4. Innovative carbons (e.i. MXNenes, heterocarbons, nitrides)	772
5. Graphene and graphite	826
6. Catalysis	1017
7. Carbon fibers and composites	1110
8. Coal, coke and carbon black	1304
9. Diamond	1360