

Materials Research Solid State Physics and Engineering

Carbon-Capture by Metal-Organic Framework Materials

David J. Fisher

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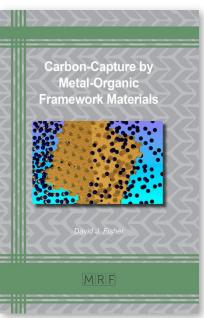
Metal-Organic Framework Materials (MOFs) are well suited for absorbing carbon dioxide. MOFs can form highly-porous structures with great adsorption capacities. The book references 295 original resources and includes their direct web link for in-depth reading.

Keyword: Global Warming, Carbon Dioxide Capture, Metal-Organic Frameworks MOFs, Adsorbents for CO2, Porous Solids, Catalytic Performance, Synthesis of MOFs, Conversion of CO2 into Methanol, Electrocatalytic Hydrogen Evolution, Hydrogen Economy, Gas Adsorption, Gas Separation, Organic Ligands, Metal Ion Clusters

ISBN 13: 978-1-64490-085-7, Publication Date: 2020 (7/5/2020) Direct URL: https://www.mrforum.com/product/carbon-capture-by-metalorganic-framework-materials 140 pages, PDF eBook DRM Free, USD 125.00 *Materials Research Foundations Vol. 77 /* BISAC: TEC021000 / BIC/Thema: TGM Imprint: Materials Research Forum LLC, *Publisher's sales rights are Wordwide*

Summary:

Metal-Organic Framework Materials (MOFs) are well suited for absorbing carbon dioxide. MOFs can form highly-porous structures with great adsorption capacities. They also offer good catalytic properties and much research refers to the relationship between catalytic performance and framework structure. In addition to simple CO2 absorption, there are other interesting applications, such as the direct electrochemical reduction into useful chemicals and fuels, the conversion of CO2 into methanol, the electrochemical reduction of CO2, or electrocatalytic hydrogen evolution (thus boosting the 'hydrogen economy'). The book references 295 original resources and includes their direct web link for in-depth reading.





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