## Contents

ref	ace	v
	POROUS MATERIALS IN ENERGY STORAGE	
1.	Exploration for Porous Architecture in Electrode Materials for Enhancing Energy and Power Storage Capacity for Application in Electro-chemical Energy Storage Malay Jana and Subrata Ray	3
2.	Graphene-based Porous Materials for Advanced Energy Storage in Supercapacitors  Zhong-Shuai Wu, Xiaoyu Shi, Han Xiao, Jieqiong Qin, Sen Wang, Yanfeng Dong, Feng Zhou, Shuanghao Zheng, Feng Su and Xinhe Bao	59
3.	Building Porous Graphene Architectures for Electrochemical Energy Storage Devices Yao Chen and George Zheng Chen	86
4.	Role of Heteroatoms on the Performance of Porous Carbons as Electrode in Electrochemical Capacitors  Ramiro Ruiz-Rosas, Edwin Bohórquez-Guarín, Diego Cazorla-Amorós and Emilia Morallón	109
5.	Three-Dimensional Nanostructured Electrode Architectures for Next Generation Electrochemical Energy Storage Devices  Terence K.S. Wong	143
6.	Three Dimensional Porous Binary Metal Oxide Networks for High Performance Supercapacitor Electrodes  Balasubramaniam Saravanakumar, Tae-Hoon Ko, Jayaseelan Santhana Sivabalan, Jiyoung Park, Min-Kang Seo and Byoung-Suhk Kim	167
7.	Porous Carbon Materials for Fuel Cell Applications N. Rajalakshmi, R. Imran Jafri and T. Ramesh	193
8.	Biomass Carbon: Prospects as Electrode Material in Energy Systems <i>P. Kalyani</i> and <i>A. Anitha</i>	218
9.	Mesoporous Silica: The Next Generation Energy Material Saika Ahmed M. Yousuf Ali Mollah M. Muhibur Rahman and Md. Ahu Bin Hagan Sugar	241

## POROUS MATERIALS IN ENERGY GENERATION

10.	3d Block Transition Metal-Based Catalysts for Electrochemical Water Splitting Md. Mominul Islam and Muhammed Shah Miran	267
11.	Wide Band Gap Nano-Semiconductors for Solar Driven Hydrogen Generation Nur Azimah Abd Samad, Kung Shiuh Lau and Chin Wei Lai	289
	NEW PERSPECTIVES AND TRENDS	
12.	Nature and Prospective Applications of Ultra-Smooth Anti-Ice Coatings in Wind Turbines Hitesh Nanda, P.N.V. Harinath, Sachin Bramhe, Thanu Subramanian, Deepu Surendran, Vinayak Sabane, M.B. Nagaprakash, Rishikesh Karande, Alok Singh and Avinash Balakrishnan	321
13.	Towards a Universal Model of High Energy Density Capacitors Francisco Javier Quintero Cortes, Andres Suarez and Jonathan Phillips	343
Inde	ex	391