

FACULTATEA DE FIZICĂ

DEPARTAMENTUL DE STRUCTURA MATERIEI, FIZICA ATMOSFEREI ȘI A PĂMÂNTULUI, ASTROFIZICĂ

Tematica și bibliografia postului de Conferențiar universitar, poziția 12

Tematica de concurs

1. Energii regenerabile – prezentare generala (motivatie, clasificare, impactul de mediu, avantaje, dezavantaje)
2. Economia hidrogenului. Celule de combustie
3. Celule de combustie microbiene
4. Materiale carbonice pentru conversia și stocarea de energie
5. Poluarea mediului și schimbările climatice
7. Istoric. Definiții și Concepte în Fizica Polimerilor. Clasificarea polimerilor
8. Reacții de polimerizare
9. Procese de polimerizare
10. Metode și tehnici de laborator pentru determinarea căldurii specifice

Bibliografie

1. David I. Bower, An introduction to Polymer Physics, Cambridge University Press (June 5, 2012), ISBN: 9780521637213;
2. Chanda M., Introduction to Polymer Science and Chemistry, CRC Press, Taylor and Francis Group, FL, USA, 2006.
3. Handbook of conducting polymers, vol. I. New York: Marcel Dekker; 1986. p. 265–91.
4. J. Liang, R. Zhou, D. Hulicova-Jurcakova and Z. Qiao, Producing Fuels and Fine Chemicals from Biomass using Nanomaterials, Chapter III- Carbon Materials, Their Energy Conversion and Storage Applications, Edited by R. Luque and A. M. Balum CRC Press 2013, ISBN: 978-1-4665-5339-2
5. Francois Beguin, Elzbieta Frackowiak., Carbons for Electrochemical Energy Storage and Conversion Systems, CRC Press 2009, ISBN 9781420053074
6. Fuel Cell Handbook (Seventh Edition) By EG&G Technical Services, Inc., U.S. Department of Energy, November 2004
7. *Bent Sorensen*, Hydrogen and Fuel Cells, (Second Edition), 2012 Elsevier Ltd, ISBN: 978-0-12-387709-3
8. Microbial Electrochemical Fuel Cell (1st Edition), Editors: Ed. Keith Scott Eileen Hao Yu, ISBN: 9781782423751, Woodhead Publishing, 2015
9. Vaughn C. Nelson, Kenneth L. Starcher, Introduction to Renewable Energy, Second Edition, CRC Press 2015, ISBN 9781498701938
10. Global warming, <https://earthobservatory.nasa.gov/Features/GlobalWarming/page1.php>
11. Jeffrey O. Bennett, A Global Warming Primer: Answering Your Questions About the Science, the Consequences, and the Solutions (*online edition, c2017*),
12. Fizica Moleculara, Lucrari Laborator, Coord Sabina Stefan



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Curricula and bibliography of the position of Associate Professor, position 12

Contents

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2. Hydrogen Economy & Fuel Cells
3. Microbial Fuel Cells
4. Carbon based materials for energy conversion and storage
5. Environmental pollution and climate change
7. Definition and Concept of Polymers. Classification of polymers
8. Polymerization Reactions
9. Polymerization processes
10. Laboratory methods and techniques for determining specific heat

Bibliography

1. David I. Bower, An introduction to Polymer Physics, Cambridge University Press (June 5, 2012), ISBN: 9780521637213;
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