

Accepted Manuscript

Title: AN ANALYSIS OF THE POROUS STRUCTURE OF ACTIVATED CARBONS OBTAINED FROM HAZELNUT SHELLS BY VARIOUS PHYSICAL AND CHEMICAL METHODS OF ACTIVATION

Authors: Mirosław Kwiatkowski, Elżbieta Broniek

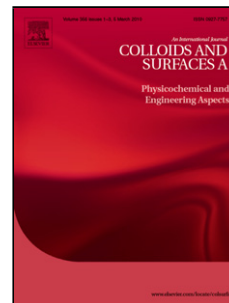
PII: S0927-7757(17)30591-5
DOI: <http://dx.doi.org/doi:10.1016/j.colsurfa.2017.06.028>
Reference: COLSUA 21715

To appear in: *Colloids and Surfaces A: Physicochem. Eng. Aspects*

Received date: 6-4-2017
Revised date: 9-6-2017
Accepted date: 12-6-2017

Please cite this article as: Mirosław Kwiatkowski, Elżbieta Broniek, AN ANALYSIS OF THE POROUS STRUCTURE OF ACTIVATED CARBONS OBTAINED FROM HAZELNUT SHELLS BY VARIOUS PHYSICAL AND CHEMICAL METHODS OF ACTIVATION, *Colloids and Surfaces A: Physicochemical and Engineering Aspects* <http://dx.doi.org/10.1016/j.colsurfa.2017.06.028>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



AN ANALYSIS OF THE POROUS STRUCTURE OF ACTIVATED CARBONS OBTAINED FROM HAZELNUT SHELLS BY VARIOUS PHYSICAL AND CHEMICAL METHODS OF ACTIVATION

Mirosław Kwiatkowski^{1*}, Elżbieta Broniek²

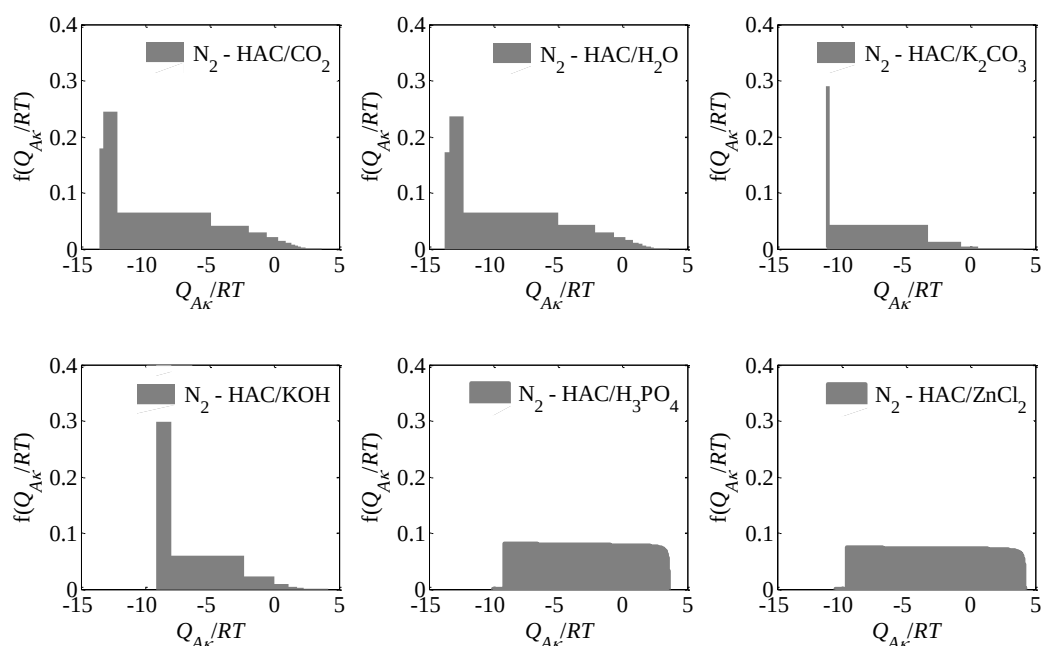
¹Faculty of Energy and Fuels, AGH University of Science and Technology,

al. A. Mickiewicza 30, 30-059 Krakow, Poland.

²Faculty of Chemistry, Wrocław University of Technology,

Gdanska 7/9, 50-344 Wrocław, Poland.

Graphical Abstract



The nitrogen adsorption energy distributions determined for all analysed activated carbons, obtained with the use of various methods of physical and chemical activation.

Abstract

This paper presents the results of the research analysing the microporous structure of carbonaceous adsorbents obtained from hazelnut shells by various physical and chemical methods of activation. The calculations were carried out with the use of the procedure of fast multivariate identification of adsorption systems with implemented LBET class adsorption models, which is generally referred to as the LBET method, as well as by DR and BET methods on the basis of adsorption isotherms of benzene and nitrogen. Porosimetry measurements, as well as imaging with the use of scanning electron microscopy and an EDX elemental analysis were also conducted.

* Corresponding author. E-mail: kwiatkow@agh.edu.pl (Mirosław Kwiatkowski)

Download English Version:

<https://daneshyari.com/en/article/4981930>

Download Persian Version:

<https://daneshyari.com/article/4981930>

[Daneshyari.com](https://daneshyari.com)