

Published since 1978 formerly as Archives of Materials Science or Archivum Nauki o Materiałach (in Polish)

Archives of Materials Science and Engineering



Editor-in-Chief Prof. Leszek A. Dobrzański

International Scientific Journal published monthly by the World Academy of Materials and Manufacturing Engineering

http://www.archivesmse.org



Volume 55 Issue 2 June 2012 Pages 49-96 International Scientific Journal published monthly by the World Academy of Materials and Manufacturing Engineering

PUBLISHED SINCE 1978 - formerly as Archives of Materials Science or Archivum Nauki o Materiałach (in Polish)

Editor-in-Chief

Prof. Leszek A. Dobrzański - Gliwice. POLAND

Editorial Council

DEPUTIES EDITOR-IN-CHIEF

Prof. Gilmar Batalha – Sao Paulo, BRASIL Prof. Nikolaos Gouskos – Athens, GREECE

Prof. Toshio Haga - Osaka, JAPAN

Prof. Abdel Magid Hamouda - Doha, QATAR

Prof. Mark J. Jackson - Worcester, USA

Prof. Thomas Neitzert - Auckland, NEW ZELAND

Prof. Jerzy Nowacki - Szczecin, POLAND

Prof. Ming-Jen Tan - Singapore, SINGAPORE

Associated Editors Team

PRODUCTION EDITOR

Ms Marzena Kraszewska, MA - Gliwice, POLAND

TEAM SECRETARY

Dr Małgorzata Dziekońska – Gliwice, POLAND

THEMATIC AREA EDITORS

Dr Mirosław Bonek - Gliwice, POLAND

Dr Klaudiusz Gołombek – Gliwice, POLAND

Dr Magdalena Polok-Rubiniec - Gliwice, POLAND

Dr Anna Włodarczyk-Fligier - Gliwice, POLAND

Dr Bogusław Ziębowicz – Gliwice, POLAND

STATISTICAL EDITOR

Dr Daniel Pakuła - Gliwice, POLAND

LANGUAGE EDITOR

Dr Janusz Madejski - Gliwice, POLAND

Editorial Assistance

Ms Justyna Hajduczek, MSc – Gliwice, POLAND Mr Paweł Jarka, MSc – Gliwice, POLAND

Ms Magdalena Kałużna, MSc - Gliwice, POLAND

Ms Małgorzata Ondrula, MSc - Gliwice, POLAND

Reading Direct Editors

Mr Adam Jagiełło, MSc - Gliwice, POLAND

Mr Piotr Zarychta, MSc – Gliwice, POLAND

Editorial Key Reviewers Committee

Prof. Dorel Banabic - Cluj Napoca, ROMANIA

Prof. Tadeusz Bołd – Gliwice, POLAND

Prof. Tara Chandra - Wollongong, AUSTRALIA

Prof. Antonio Cunha – Guimaraes, PORTUGAL

Prof. Jan Cwajna – Katowice, POLAND

Prof. Edward D. Doyle – Swinburne, AUSTRALIA

Prof. Georgiy Drapak - Khmelnitsky, UKRAINE

Prof. Jan Dutkiewicz - Cracow, POLAND

Prof. Stuart Hampshire - Limerick, IRELAND

Prof. Adam Hernas - Katowice, POLAND

Prof. Marek Hetmańczyk - Katowice, POLAND

Prof. Hong Hocheng - Hsinchu, TAIWAN

Prof. Werner Hufenbach - Dresden, GERMANY

Prof. David Hui - New Orleans, USA

Prof. Yong-Taek Im - Daejeon, KOREA

Prof. Leopold Jeziorski Dr hc - Czestochowa, POLAND

Prof. Jan Kazior - Cracow, POLAND

Prof. Albert Kneissl - Leoben, AUSTRIA

Prof. Ivars Knets - Riga, LATVIA

Prof. Janez Kopač Dr hc - Ljubljana, SLOVENIA

Prof. Piotr Kula - Lodz, POLAND

Prof. Krzysztof J. Kurzydłowski Dr hc - Warsaw, POLAND

Prof. Karl Kuzman - Liubliana. SLOVENIA

Prof. Eugeniusz Łągiewka - Katowice, POLAND

Prof. Bogusław Major - Cracow, POLAND

Prof. Cemal Meran – Denizli, TURKEY

Prof. Stanisław Mitura Dr hc - Lodz, POLAND

Prof. Ryszard Nowosielski – Gliwice, POLAND

Prof. Abraham Atta Ogwu - Paisley, UK

Prof. Jerzy Pacyna - Cracow, POLAND

Prof. Lucjan Pająk – Katowice, POLAND

Prof. Peter Palček - Zilina, SLOVAK REPUBLIC

Prof. Fusheng Pan - Chongqing, CHINA

Prof. Jan Pilarczyk - Gliwice, POLAND

Prof. Wojciech Przetakiewicz - Warsaw, POLAND

Prof. Maria Richert - Cracow, POLAND

Prof. Maria H. Robert - Campinas, BRAZIL

Prof. Mario Rosso - Turin, ITALY

Prof. Stanislav Rusz - Ostrava, CZECH REPUBLIC

Prof. Yuriy Shalapko - Khmelnitsky, UKRAINE

Prof. Jan Sieniawski – Rzeszow, POLAND

Prof. Paul Siffert - Strassburg, FRANCE

Prof. Jorge A. Sikora - Mar del Plata, ARGENTINA

Prof. Božo Smoljan - Rijeka, CROATIA

Prof. Jerry Sokolowski – Windsor, CANADA

Prof. Mirko Soković - Ljubljana, SLOVENIA

Prof. Antonio Sousa – Fredericton, CANADA

Prof. Jerzy Stobrawa – Gliwice, POLAND

Prof. Vasco Teixeira - Braga, PORTUGAL

Prof. Miklos Tisza – Miskolc, HUNGARY

Prof. Boris Tomov Dr hc - Rousse, BULGARIA

Prof. Jose M. Torralba Dr hc - Madrid, SPAIN

Prof. Laszlo Toth - Miskolc, HUNGARY

Prof. Algirdas V. Valiulis - Vilnius, LITHUANIA

Prof. Tadeusz Wierzchoń – Warsaw, POLAND

Prof. Abdalla Wifi – Cairo, EGYPT

Prof. Władysław K. Włosiński Dr hc – Warsaw, POLAND

Prof. Gwomei Wu - Taoyuan, TAIWAN

Prof. Senay Yalcin - Istanbul, TURKEY

Prof. Bekir Sam Yilbas - Dhahran, SAUDI ARABIA

Prof. Andrzej Zieliński - Gdansk, POLAND

Prof. Paweł Zieba – Cracow, POLAND

Prof. Jozef Zrnik - Plzen, CZECH REPUBLIC

Prof. Marian Żenkiewicz - Bydgoszcz, POLAND

Prof. Marcel Žitňanský – Bratislava, SLOVAK REPUBLIC

Patronage



World Academy of Materials and Manufacturing Engineering



Association of Computational Materials Science and Surface Engineering





Institute of Engineering Materials and Biomaterials of Silesian University of Technology, Gliwice, Poland

Financial support

The efforts to achieve the financial support of the Journal in 2012 from the Ministry of Science and Higher Education in Poland have begun.

Abstracting services

This Journal is sent to individual receivers from ca. 50 countries of the world and is delivered to the National Libraries and Universities and also to other scientific institutions in ca. 50 countries of the world. The electronic system of Reading Direct allows to access to the electronic version of that journal on-line, in the promotional period free of charge. This Journal is included in the reference list of the Polish Ministry of Science and Higher Education (9 points]. The Journal is cited by Abstracting Services such as:





















The procedure of its registration in the databases of Compandex, CiteSeer, GetCited, Web of science, Engineering Village, Public Knowledge Project, Edith Cowan University's Institutional Repository, Journals Online and Inspec has begun.

Journal Registration

The Journal is registered by the 1st Civil Department of the District Court in Gliwice, Poland at number 278.

Publisher



International OCSCO World Press ul. S. Konarskiego 18a/366, 44-100 Gliwice, Poland

e-mail: info@archivesmse.org

Bank account: Stowarzyszenie Komputerowej Nauki o Materiałach i Inżynierii Powierzchni

Bank name: ING Bank Śląski

Bank address: ul. Zwycięstwa 28, 44-100 Gliwice, Poland Account number/IBAN CODE: PL76105012981000002300809767

Swift code: INGBPLPW

Gliwice - Sao Paulo - Athens - Osaka - Doha - Worcester - Auckland - Szczecin - Singapore

® 2012 International OCSCO World Press.

All rights reserved.

Reading Direct

This journal is a part of Reading Direct, the free of charge alerting service which sends tables of contents by e-mail for this journal and in the promotion period also the full texts of papers. You can register to Reading Direct at

http://www.archivesmse.org

The paper used for this journal meets the requirements of acid-free paper.

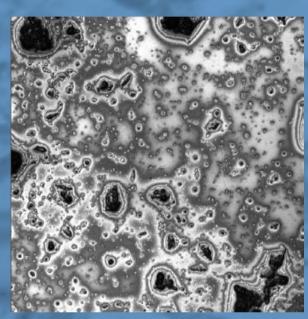
Printed in Poland.

Professor Leszek A. Dobrzanski M Dr hc Editor-in-Chief of the AMSE President of the WAMME President of the ACMSSE



Dear Readers,

The scope of interests of our Archives of Materials Science and Engineering is wide. In the next issue we publish as usual a few scientific papers. I encourage PT Readers to read these papers, and PT Authors to publish their scientific achievements in our pages.



The paper written by J. Weszka, M.M. Szindler, M. Chwastek-Ogierman, M. Bruma and P. Jarka on "CLSM and UV-VIS researches on polyoxadiazoles thin films" on a page 53 informs about the surface morphology and optical properties of polyoxadiazoles thin films. This paper includes description of the way of the spin rate influencing the polymer thin films. In order to use a polymer thin film in photovoltaics or optoelectronics it must have a high internal transmission density. Further research of polymer thin films are recommended. The spin coating method allows to deposit uniform thin films. It is important to know how the spin rate influences the thin films properties. It is also important to find a new use for this group of material engineering in photovoltaic or optoelectronics devices. The analysis of images and spectra has confirmed that the quality of thin films depends upon the used polymers. It was also observed that the parameters of the spin coating method have a significant effect on the morphology and the optical properties. The spin rate has a strong impact on them. The good properties of thin films make them suitable for various applications. The value of this paper is to define the optimal parameters of spin-coating technology for polyoxadiazoles thin films. The results allow to choose the optimal parameters of the deposition process. Spin coating is a very good method of obtaining thin films which are obligated to have the same thickness over the whole surface.