

FIBRES & TEXTILES in Eastern Europe

published by

*Instytut Biopolimerów i Włókien Chemicznych
Institute of Biopolymers and Chemical Fibres
(IBWCh), Łódź, Poland*

*In publishing participates Kaunas University
of Technology (KTU), Kaunas, Lithuania*

Editorial Office

*ul. Skłodowskiej-Curie 19/27, 90-570 Łódź, Poland
tel. (48-42) 638-03-00, fax (48-42) 637-65-01
e-mail: infor@ibwch.lodz.pl http://www.fibtex.lodz.pl*

Editorial Department

Editor-in-Chief

Bogdan Mac

V-ce Editor-in-Chief

Marta Cyrczak

Assistant Editors

Emilia Jaszczurska, Anna Wahl

Text Editor

Geoffrey Large

Typesetting

Andrzej Bodek

Printed at

Media-Press

Editorial Committee

Danuta Ciecchańska (IBWCh)

Izabela Ciesielska (TUŁ)

Włodzimierz Cygan (TUŁ)

Karolina Grzebiński (IBWCh)

Ryszard Korycki (TUŁ)

Małgorzata Michniewicz (IBWCh)

Rimvydas Milašius (KTU)

Antoni Niekraszewicz (IBWCh)

Zbigniew Stępień (TUŁ)

Krystyna Twarowska-Schmidt (IBWCh)

Alojzy Urbanowski (IBWCh)

Dariusz Wawro (IBWCh)

Scientific Programming Board

Chairman:

Prof. Andrzej Ziabicki

Polish Academy of Sciences, Warsaw, Poland

Members:

Prof. Christo Betchev

Technical University of Sofia, Bulgaria

Prof. Tadeusz Jackowski

Technical University of Łódź, Poland

Prof. Ryszard Kozłowski

Institute of Natural Fibres, Poznań, Poland

Prof. Izabella Krucińska

Technical University of Łódź, Poland

Prof. Anton Marcinčič

Slovak University of Technology,

Bratislava, Slovak Republic

Prof. Józef Masajtis

Technical University of Łódź, Poland

Prof. Vytautas Milašius

Kaunas University of Technology, Lithuania

Prof. Jiří Militký

Technical University of Liberec, Czech Republic

Prof. Heinrich Planck

Institute for Textile Techniques and Technology,

Denkendorf, Germany

Prof. Roshan Shishoo

Institute of Fibres and Polymers Research AB,

Mölnådal, Sweden

Prof. Sigita Stanys

Kaunas University of Technology, Lithuania

Prof. Zoran Stjepanović

University of Maribor, Slovenia

Prof. Janusz Szosland

Technical University of Łódź, Poland

Prof. Andrzej Włochowicz

University of Bielsko-Biala, Poland



FIBRES & TEXTILES
in Eastern Europe
is decorated
with the
Golden Order
of the Polish Textile
Association



Volume 20, No. 6B
(96)

November / December
2012

ISSN 1230-3666

Fibres & Textiles in Eastern Europe is inserted on the 'ISI Master Journal List' of the Institute for Scientific Information, Philadelphia, USA (for the year 2011 has an Impact Factor of 0.532) and is indexed in Research Alert, SCI Expanded (Sci Search and Web of Science), the Materials Science Citation Index, Current Contents/Engineering, Computing & Technology; as well as by the Textile Institute, Manchester, in the Information Service; and in Toga FIZ Technik; Rapra Technology Ltd.; Elsevier Geo Abstracts; Textiles Eastern Europe - World Textile Publications; Chemical Abstracts Service; and by Referativny Zhurnal.

The content of 'Fibres & Textiles in Eastern Europe' is available by free open access on the website <http://www.fibtex.lodz.pl>, starting from issue No 3/2002.

In Index Copernicus Journal Master List in 2011 FIBRES & TEXTILES in Eastern Europe ISSN 1230-3666 has received ICV = 13.54.

No part of this publication may be reproduced without the prior written permission of the publisher: Instytut Biopolimerów i Włókien Chemicznych - Institute of Biopolymers and Chemical Fibres.

No responsibility is assumed by the publisher for any injury and/or damage to persons or property as a matter of application of any methods, products, instructions or ideas contained in the material herein. Although all advertising material is expected to conform to ethical standards, inclusion in this publication does not constitute a guarantee or endorsement of the quality or value of such product.

On the cover a fragment of Jolanta Owidzka's structural tapestry 'Prayer book'

This issue is financially supported by the Ministry of Science and Higher Education.