

Preface

In 2008, the Ministry of Innovation, Science, and Research of the German state North Rhine-Westphalia launched the “NRW Research Schools” which offer the possibility of studying for a PhD/doctorate within a structured doctoral program for PhD candidates with superior academic track records. Currently, 17 Research Schools are funded by this initiative.

The international NRW Research School “Energy Generation Based on Renewable Energy Resources” (BrenaRo) is a joint initiative of more than 15 institutes from RWTH Aachen University. Based on an interdisciplinary PhD program, the main long-term objective of this research school is to train highly qualified experts in the field of energy generation with a special focus on renewable energy resources.

This interdisciplinary approach combines the research fields of Biology, Chemistry, and Engineering. The close cooperation of the Research School with the cluster of excellence “Tailor-Made Fuels from Biomass” and the DFG Collaborative Research Centre “Model based control of homogenized low-temperature combustion” provides the opportunity to work in an interdisciplinary scientific environment.

This volume contains the papers presented at the “BrenaRo Winterschool 2011” held at the “Erholungs-Gesellschaft Aachen 1837” in Aachen, Germany on November 21–22, 2011. The symposium was organized by the Institute Cluster IMA/ZLW & IfU and the Institute of Aerodynamics of RWTH Aachen University, Germany.

In the name of all scientists involved in the NRW Research School BrenaRo, the speaker of the program, Wolfgang Schröder (RWTH Aachen University, Aachen Germany), would like to express gratitude to all the participating scientists for their contributions.

The present monograph is a snapshot of the state of the art of the joint initiative of biology, chemistry, and engineering to develop new fuels. The volume gives a broad overview of the ongoing work in this field in Germany. The order of the papers in this book corresponds closely to that of the sessions of the Symposium.

The editors are grateful to Prof. Dr. W. Schröder as the General Editor of the “Notes on Numerical Fluid Mechanics and Multidisciplinary Design” and to the Springer-Verlag for the opportunity to publish the results of the Symposium.

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Michael Klaas
Stefan Pischinger
Wolfgang Schröder

Fuels From Biomass: An Interdisciplinary Approach

A collection of papers presented at the Winter School

2011 of the North Rhine Westphalia Research School

"Fuel production based on renewable resources"

associated with the Cluster of Excellence "Tailor-Made

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Klaas, M.; Pischinger, S.; Schröder, W. (Eds.)

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