

# Introduction to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals

JONATHAN WOODWARD

*Oak Ridge National Laboratory*

CHARLES E. WYMAN

*National Renewable Energy Laboratory*

BARBARA J. GOODMAN

*National Renewable Energy Laboratory*

Biotechnology for the production of fuels and chemicals can be considered as the utilization of naturally occurring biomass by microorganisms and their derived enzymes for the production of both primary and secondary metabolites. Basically, this exploitation involves several stages including preparation of the raw materials, its microbiological/biochemical conversion to a fuel or chemical, and recovery of the product. Utilization of biotechnology for the protection of our environment from these and other processes is of vital and growing importance. Ultimately, through a coordinated effort of research, development, and communication by academic, government, and industry, the application of biotechnology to generate fuels and chemicals useful to society will grow with reduced environmental impact.

The Fourteenth Symposium on Biotechnology for Fuels and Chemicals continued the symposium series and provided a forum for the presentation of research results and exchange of ideas on advances in biotechnology impacting the utilization of renewable biomass for fuels and chemicals production. The technical program consisted of oral and poster presentations on thermal/chemical/biological processing of biomass, applied biological and bioengineering research, and environmental biotechnology. Special topic discussion sessions were also held. The symposium continued to provide a congenial forum for productive interaction among the attendees from the academic, industrial, and governmental sectors. The meeting was sponsored by the Biofuels Systems Division of the US Department of Energy (DOE); the DOE Advanced Industrial Concepts Division; the Oak Ridge National Laboratory; the National Renewable Energy Laboratory; Badger Engineers, Inc.; Novo Nordisk Bioindustrials, Inc.; Archer Daniels Midland Company; Martin Marietta Energy Systems, Inc.; Monsanto Corporate Research; South Point Ethanol; and the Division of Biochemical Technology of the American Chemical Society. Organization of the symposium was as follows:

### Organizing Committee

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### Session Chairpersons and Cochairpersons

#### *Session 1: Thermal, Chemical, and Biological Processing*

Raphael Katzen, *Raphael Katzen Associates International, Inc.*  
 Norman D. Hinman, *National Renewable Energy Laboratory*

#### *Session 2: Applied Biological Research I*

Tadashi Matsunaga, *Tokyo University of Agriculture and Technology*  
 Elias Greenbaum, *Oak Ridge National Laboratory*

#### *Session 3: Bioprocessing Research II*

R. Mark Worden, *Michigan State University*  
 Christopher J. Rivard, *National Renewable Energy Laboratory*

#### *Session 4: Bioengineering Research*

Lee R. Lynd, *Dartmouth College*  
 Barbara J. Goodman, *National Renewable Energy Laboratory*

#### *Session 5: Environmental Biotechnology*

Mark E. Reeves, *Oak Ridge National Laboratory*

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### References

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12. "Proceedings of the Twelfth Symposium on Biotechnology for Fuels and Chemicals" (1991), *Appl. Biochem. Biotechnol.* **28,29**.
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This symposium has been held annually since 1978. We are pleased to have the proceedings of the Fourteenth Symposium currently published in this special issue to continue the tradition of providing a record of the contributions made.

The Fifteenth Symposium is planned for May 10–14, 1993, in Colorado Springs, CO. We encourage comments or discussions relevant to the format or content of that meeting.