

Session 4
Bioengineering Research

Introduction to Session 4

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H. R. BUNGAY¹ AND J. S. WATSON²

¹*Rensselaer Polytechnic Institute, Troy, NY; and* ²*Oak Ridge National Laboratory, Oak Ridge, TN 37831*

Papers for bioengineering research were gleaned from submissions that could have filled three sessions with first-rate presentations. Our choices were a review, to provide perspective, and those papers that seemed most original. Ethanol is still the featured target of biomass refining, and three potential process improvements and a method for starch hydrolysis are reported. Two papers address alternative products: one emphasizes bioconversion; the other is about product recovery.

This session can be summarized by stating that research aimed at fuel alcohol is alive and well, but other products or coproducts deserve serious attention. It is particularly interesting that, after so many years of research on ethanol, exciting new approaches to its production and recovery continue to appear. One difference is the widening of the scope of research to include several operations that are interrelated. Reactor designs may permit simultaneous bioconversion and a first step in product recovery.

Multiple authorship and our international blend of institutions attest to the wide interest in, and the need for, team approaches to biotechnology aimed at fuels and chemicals. We thank our authors for submitting their best work to this meeting to continue its rise as the best opportunity for exchanging information in an area of vital concern to all nations.