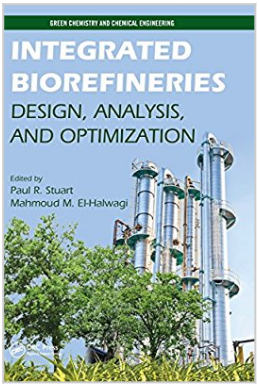

Integrated Biorefineries: Design, Analysis, and Optimization (Green Chemistry and Chemical Engineering)

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Integrated Biorefineries: Design, Analysis, and Optimization examines how to create a competitive edge in biorefinery innovation through integration into existing processes and infrastructure. Leading experts from around the world working in design, synthesis, and optimization of integrated biorefineries present the various aspects of this complex process, capturing the state of the art in the advancing bioeconomy. The book defines an integrated biorefinery as a processing facility that transforms biomass into value-added products?from biofuels and biochemicals to food and pharmaceuticals. The chapters cover biorefinery product and process design, supply chains, process analysis, feedstocks, technologies, and policy and environmental analysis. They focus on second-generation feedstocks, including forestry resources, energy crops, agricultural residues, oils, and various waste materials.

With the growing interest in sustainability in general and in renewable resources in industrial facilities, biorefineries are likely to play increasingly significant roles and have greater economic, environmental, and societal impact. This book fills an information gap by presenting cutting-edge advances that can effectively guide engineers and decision makers in the synthesis, selection, design, analysis, and optimization of biorefineries.

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Editorial Review

Review

"Finally a text on biorefinery design – presented in a format that is practical for industry and academia alike. The co-editors are consultants as well as academics and, between them, have long experience in the key industry sectors related to biorefining: forestry, agriculture, and energy/oil, and gas. They have assembled an impressive set of chapter authors from leading designers from around the globe. The book won't sit on the shelf long – as an industry practitioner, the information from the 27 chapters will provide invaluable knowledge in various ways on a regular basis."
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"The book provides a good overview of recent advances in its subject by world-leading experts. One of the strengths of this book is the strong focus on product development, economics, and supply chains, which are crucial in making biorefining an industrial reality."
?Jussi Manninen, VTT Technical Research Centre of Finland

About the Author

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