Refinery Engineering: Integrated Process Modeling and Optimization
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DESCRIPTION
A pioneering and comprehensive introduction to the complex subject of integrated refinery process simulation, using many of the tools and techniques currently employed in modern refineries.

Adopting a systematic and practical approach, the authors include the theory, case studies and hands-on workshops, explaining how to work with real data.

As a result, senior-level undergraduate and graduate students, as well as industrial engineers learn how to develop and use the latest computer models for the predictive modeling and optimization of integrated refinery processes.

Additional material is available online providing relevant spreadsheets and simulation files for all the models and examples presented in the book.

ABOUT THE AUTHOR
Ai-Fu Chang received his Ph.D. in the Department of Chemical Engineering at Virginia Polytechnic Institute and State University in September, 2011. He received his B.S. in chemical engineering from National Taiwan University in 2001. He completed his doctoral dissertation on integrated process modeling and product design of biodiesel manufacturing, and refinery reaction and fractionation systems. The latter was the basis of this textbook. He has worked on several industrial modeling projects, including
poly(acrylonitrile-vinyl acetate), hydrocracking, and biodiesel. These projects were collaborative efforts between Virginia Tech, Aspen Technology, and industrial manufacturers. He is currently employed by Chevron Phillips Chemical Company.

**Kiran Pashikanti** was a PhD student in the Department of Chemical Engineering at Virginia Tech. He received his B.S. in chemical engineering from Virginia Commonwealth University in 2005, and his Ph.D. in chemical engineering from Virginia Tech in September, 2011. He has worked on several industrial modeling projects on integrated modeling of reaction and fractionation systems, and of carbon-dioxide capture processes. This textbook grows out of his doctoral dissertation on the predictive modeling of fluid catalytic cracking and catalytic reforming processes. He is currently employed by Chevron Phillips Chemical Company.

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