Sustainable Manufacturing Systems: An Energy Perspective
Lin Li, MengChu Zhou

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DESCRIPTION

Learn more about energy efficiency in traditional and advanced manufacturing settings with this leading and authoritative resource.

*Sustainable Manufacturing Systems: An Energy Perspective* delivers a comprehensive analysis of energy efficiency in sustainable manufacturing. The book presents manufacturing modeling methods and energy efficiency evaluation and improvement methods for different manufacturing systems. It allows industry professionals to understand the methodologies and techniques being embraced around the world that lead to advanced energy management.

The book offers readers a comprehensive and systematic theoretical foundation for novel manufacturing system modeling, analysis, and control. It concludes with a summary of the insights and applications contained within and a discussion of future research issues that have yet to be grappled with.

*Sustainable Manufacturing Systems* answers the questions that energy customers, managers, decision makers, and researchers have been asking about sustainable manufacturing. The book's release coincides with recent and profound advances in smart grid applications and will serve as a practical tool to assist industrial engineers in furthering the green revolution. Readers will also benefit from:

- A thorough introduction to energy efficiency in manufacturing systems, including the current state of research and research methodologies
• An exploration of the development of manufacturing methodologies, including mathematical modeling for manufacturing systems and energy efficiency characterization in manufacturing systems

• An analysis of the applications of various methodologies, including electricity demand response for manufacturing systems and energy control and optimization for manufacturing systems utilizing combined heat and power systems

• A discussion of energy efficiency in advanced manufacturing systems, like stereolithography additive manufacturing and cellulosic biofuel manufacturing systems

Perfect for researchers, undergraduate students, and graduate students in engineering disciplines, especially for those majoring in industrial, mechanical, electrical, and environmental engineering, *Sustainable Manufacturing Systems* will also earn a place in the libraries of management and business students interested in manufacturing system cost performance and energy management.

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**ABOUT THE AUTHOR**

**Lin Li, PhD**, is an Assistant Professor in the Department of Mechanical and Industrial Engineering at the University of Illinois at Chicago. Dr. Li has published over sixty scientific papers in scholarly journals and 34 for conferences.

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