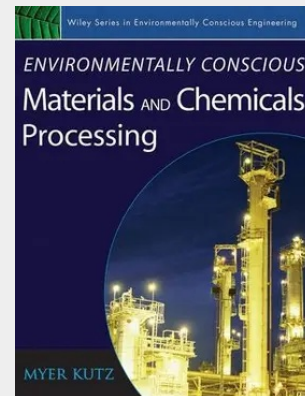


Environmentally Conscious Materials and Chemicals Processing

Best practices for designing and implementing environmentally friendly material and chemical processing operations The third volume of the Wiley Series in Environmentally Conscious Engineering, Environmentally Conscious Materials and Chemicals Processing, offers state-of-the-science approaches for planning, designing, and implementing environmentally friendly material and chemical processing systems. The logical organization guides you through every stage, from evaluating environmental hazards of industrial materials and chemicals through to assessing the economics of environmental improvement projects. Based on their hands-on field experience, this volume's team of leading experts discusses a broad range of industrial materials, including metals, chemicals, plastics, building, and packaging materials. Coverage includes not only the extraction, production, and recycling of metals, but also methods for reducing waste and preventing pollution in chemical plants. Chapters include: * Engineering of Mineral Extraction * Waste Reduction in Metals Manufacturing * Life Cycle Evaluation of Chemical Processing Plants * Waste Reduction for Chemical Plant Operations * Industrial Waste Auditing * Reverse Production Systems: Materials Production from Wastes * Environmental Life Cycle Analysis of Alternative Building Materials * Wastewater Engineering * Environmental Impacts of Packaging * Aqueous Processing for Environmental Protection * Solid Waste Disposal and Recycling * Processing of Post-Consumer Recycled Plastics * Supercritical Water Oxidation (SCWO) Case studies and examples provided throughout the volume demonstrate how to effectively plan for and implement environmentally friendly processing practices. Figures illustrate key process engineering principles, and tables provide at-a-glance summaries of key data. Finally, end-of-chapter references enable you to investigate individual topics in greater depth. Turn to all of the books in the Wiley Series in Environmentally Conscious Engineering for the most cutting-edge, environmentally friendly engineering practices and technologies.

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