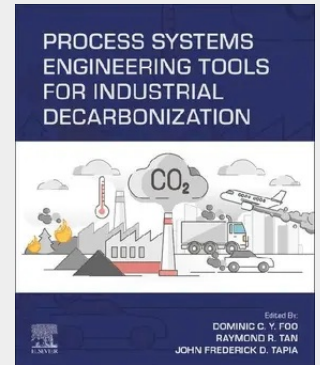


Process Systems Engineering Tools for Industrial Decarbonization

Process Systems Engineering Tools for Industrial Decarbonization explores the latest mathematical methods driving large-scale adoption of technologies aimed at reducing carbon emissions in industrial systems. By examining systematic strategies for planning, decision-making, and designing low-carbon industrial processes, the book offers readers—both experts and newcomers—a comprehensive understanding of how recent advances in process engineering can support a sustainable future. Special emphasis is placed on the integration and optimization of cutting-edge technologies such as Carbon Capture, Utilization, and Storage (CCUS), Negative Emission Technologies (NETs), and other innovative decarbonization solutions as they mature and become viable at scale. Beyond technical frameworks, the book addresses the urgent need to manage rising atmospheric CO₂ levels, which now average 420 ppm—well above safe thresholds. It highlights the importance of using decision-making tools to efficiently deploy and systematize available technologies, ensuring the industrial sector contributes effectively to climate mitigation.

Process Systems Engineering Tools for Industrial Decarbonization explores the latest mathematical methods driving large-scale adoption of technologies aimed at reducing carbon emissions in industrial systems. By examining systematic strategies for planning, decision-making, and designing low-carbon industrial processes, the book offers readers—both experts and newcomers—a comprehensive understanding of how recent advances in process engineering can support a sustainable future. Special emphasis is placed on the integration and optimization of cutting-edge technologies such as Carbon Capture, Utilization, and Storage (CCUS), Negative Emission Technologies (NETs), and other innovative decarbonization solutions as they mature and become viable at scale.

Beyond technical frameworks, the book addresses the urgent need to manage rising atmospheric CO₂ levels, which now average 420 ppm—well above safe thresholds. It highlights the importance of using decision-making tools to efficiently deploy and systematize available technologies, ensuring the industrial sector contributes effectively to climate mitigation.



169,50 €

169,50 € (zzgl. MwSt.)

*vorbestellbar, Erscheinungstermin ca.
August 2026*

Artikelnummer: 9780443217210

Medium: Buch

ISBN: 978-0-443-21721-0

Verlag: Elsevier Science

Erscheinungstermin: 01.08.2026

Sprache(n): Englisch

Auflage: Erscheinungsjahr 2026

Produktform: Kartoniert

Gewicht: 450 g

Seiten: 250

Format (B x H): 191 x 235 mm

