MEMBRANE-BASED SEPARATIONS IN METALLURGY
Principles and Applications

Lan Ying Jiang and Li Na
"Membrane-Based Separation in Metallurgy: Principles and Applications" begins with basic coverage of the basic principles of the topic and then explains how membrane technology helps in the development of new environmentally friendly and sustainable metallurgical processes.

The book features the principles of metallurgical process and how widely the membrane-based technology has been applied in metallurgical industry, including the basic principles of membrane-based separation in terms of material science, membrane structure engineering, transport mechanisms, and module design, detailed metallurgical process flowcharts with emphasis on membrane separations, current process designs, and describes problems and provides possible solutions.

In addition, the book includes specific membrane applications, molecular design of materials, fine tuning of membrane's multi-scale structure, module selection and process design, along with a final analysis of the environmental and economic benefits achieved by using these new processes.

Outlines membrane separation processes and their use in the field of metallurgyIncludes case studies and examples of various processesDescribes individual unit operations and sectors of extractive metallurgy in a clear and thorough presentation for students and engineersProvides a quick reference to wastewater treatment using membrane technology in the metallurgical industryOutlines the design of flowsheets, a topic that is not covered in academic studies, but is necessary for the design of working processProvides examples and analysis of the economic implications and environmental and social impacts"