Gas separation membranes offer a number of benefits over other separation technologies, and they play an increasingly important role in reducing the environmental impacts and costs of many industrial processes.

This book describes recent and emerging results in membrane gas separation, including highlights of nanoscience and technology, novel polymeric and inorganic membrane materials, new membrane approaches to solve environmental problems e.g. greenhouse gases, aspects of membrane engineering, and recent achievements in industrial gas separation. It includes:

- Hyperbranched polyimides, amorphous glassy polymers and perfluorinated copolymers
- Nanocomposite (mixed matrix) membranes
- Polymeric magnetic membranes
- Sequestration of CO2 to reduce global warming
- Industrial applications of gas separation

Developed from sessions of the most recent International Congress on Membranes and Membrane Processes, Membrane Gas Separation gives a snapshot of the current situation, and presents both fundamental results and applied achievements.
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