Industrial high pressure processes open the door to many reactions that are not possible under 'normal' conditions. These are to be found in such different areas as polymerization, catalytic reactions, separations, oil and gas recovery, food processing, biocatalysis and more.

The most famous high pressure process is the so-called Haber-Bosch process used for fertilizers and which was awarded a Nobel prize.

Following an introduction on historical development, the current state, and future trends, this timely and comprehensive publication goes on to describe different industrial processes, including methanol and other catalytic syntheses, polymerization and renewable energy processes, before covering safety and equipment issues.

With its excellent choice of industrial contributions, this handbook offers high quality information not found elsewhere, making it invaluable reading for a broad and interdisciplinary audience.
ABOUT THE AUTHOR

Rudolf Eggers has been dealing with basic research and application of high pressure processes since 1977 when he started his industrial career at Thyssen Maschinenbau in Witten and Krupp Industrietechnik in Hamburg. As the head of the process engineering department he became responsible for the introduction of supercritical extraction plants in industrial scale. Prior to that he studied mechanical and process engineering at Technische Universität Hannover (1966 - 1971) and worked as a research assistant at the institute of energy process technique of the Technische Universität Clausthal (1971 - 1977) where he received the PhD degree in 1976. In 1984 he was appointed from industry to a professorship for high pressure processes at the Technische Universität Hamburg-Harburg. Since then Rudolf Eggers supervised a research group. His research fields are aligned to high pressure processes, evaluation of corresponding thermo physical data, interfacial phenomena and heat and mass transfer. In 1988, 1998 and 1999 Rudolf Eggers refused three further appointments from a national research institute and universities in Germany. He is member of scientific comities and author of more than 130 publications, mainly on high pressure processes.

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