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Autore	Kafka, Franz
Titolo	Journal intime suivi de Esquisse d'une autobiographie considerations sur le péché méditations / Franz Kafka ; introduction et traduction par Pierre Klossowski
Pubbl/distr/stampa	Paris : B. Grasset, c1945
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Soggetti	Diari e memorie
Lingua di pubblicazione	Francese
Formato	Materiale a stampa
Livello bibliografico	Monografia
2. Record Nr.	UNINA9910144342703321
Titolo	Membrane technology in the chemical industry [[electronic resource] /] / edited by Suzana Pereira Nunes and Klaus-Vktor Peinemann
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Altri autori (Persone)	NunesS. P (Suzana Pereira) PeinemannK. V (Klaus-Viktor)
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Nota di bibliografia

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Nota di contenuto

Membrane Technology; Contents; Preface; List of Contributors; Part I Membrane Materials and Membrane Preparation; 1 Introduction; 2 Membrane Market; 3 Membrane Preparation; 3.1 Phase Inversion; 4 Presently Available Membranes for Liquid Separation; 4.1 Membranes for Reverse Osmosis; 4.2 Membranes for Nanofiltration; 4.2.1 Solvent-resistant Membranes for Nanofiltration; 4.2.2 NF Membranes Stable in Extreme pH Conditions; 4.3 Membranes for Ultrafiltration; 4.3.1 Polysulfone and Polyethersulfone; 4.3.2 Poly(vinylidene fluoride); 4.3.3 Polyetherimide; 4.3.4 Polyacrylonitrile; 4.3.5 Cellulose 4.3.6 Solvent-resistant Membranes for Ultrafiltration 4.4 Membranes for Microfiltration; 4.4.1 Polypropylene and Polyethylene; 4.4.2 Poly (tetrafluorethylene); 4.4.3 Polycarbonate and Poly(ethylene terephthalate); 5 Surface Modification of Membranes; 5.1 Chemical Oxidation; 5.2 Plasma Treatment; 5.3 Classical Organic Reactions; 5.4 Polymer Grafting; 6 Membranes for Fuel Cells; 6.1 Perfluorinated Membranes; 6.2 Nonfluorinated Membranes; 6.3 Polymer Membranes for High Temperatures; 6.4 Organic-Inorganic Membranes for Fuel Cells; 7 Gas Separation with Membranes; 7.1 Introduction 7.2 Materials and Transport Mechanisms 7.2.1 Organic Polymers; 7.2.2 Background; 7.2.3 Polymers for Commercial Gas-separation Membranes; 7.2.4 Ultrahigh Free Volume Polymers; 7.2.5 Inorganic Materials for Gas-separation Membranes; 7.2.6 Carbon Membranes; 7.2.7 Perovskite-type Oxide Membranes for Air Separation; 7.2.8 Mixed-matrix Membranes; 7.3 Basic Process Design; Acknowledgments; References; Part II Current Application and Perspectives; 1 The Separation of Organic Vapors from Gas Streams by Means of Membranes; Summary; 1.1 Introduction; 1.2 Historical Background 1.3 Membranes for Organic Vapor Separation 1.3.1 Principles; 1.3.2 Selectivity; 1.3.3 Temperature and Pressure; 1.3.4 Membrane Modules; 1.4 Applications; 1.4.1 Design Criteria; 1.4.2 Off-gas and Process Gas Treatment; 1.4.2.1 Gasoline Vapor Recovery; 1.4.2.2 Polyolefin Production Processes; 1.5 Applications at the Threshold of Commercialization; 1.5.1 Emission Control at Petrol Stations; 1.5.2 Natural Gas Treatment; 1.5.3 Hydrogen/Hydrocarbon Separation; 1.6 Conclusions and Outlook; References; 2 Gas-separation Membrane Applications; 2.1 Introduction; 2.2 Membrane Application Development 2.2.1 Membrane Selection 2.2.2 Membrane Form; 2.2.3 Membrane Module Geometry; 2.2.4 Compatible Sealing Materials; 2.2.5 Module Manufacture; 2.2.6 Pilot or Field Demonstration; 2.2.7 Process Design; 2.2.8 Membrane System; 2.2.9 Beta Site; 2.2.10 Cost/Performance; 2.3 Commercial Gas-separation Membrane Applications; 2.3.1 Hydrogen Separations; 2.3.2 Helium Separations; 2.3.3 Nitrogen Generation; 2.3.4 Acid Gas-Separations; 2.3.5 Gas Dehydration; 2.4 Developing Membrane Applications; 2.4.1 Oxygen and Oxygen-enriched Air; 2.4.2 Nitrogen Rejection from Natural Gas; 2.4.3 Nitrogen-enriched Air (NEA) References

Sommario/riassunto

Membrane Technology - a clean and energy saving alternative to traditional/conventional processes. Developed from a useful laboratory technique to a commercial separation technology, today it has widespread and rapidly expanding use in the chemical industry. It has established applications in areas such as hydrogen separation and recovery of organic vapors from process gas streams, and selective transport of organic solvents, and it is opening new perspectives for catalytic conversion in membrane reactors. Membrane technology

provides a unique solution for industrial waste treatment and

3. Record Nr.	UNINA9910337631103321
Autore	Könözsy László
Titolo	A New Hypothesis on the Anisotropic Reynolds Stress Tensor for Turbulent Flows : Volume I: Theoretical Background and Development of an Anisotropic Hybrid k-omega Shear-Stress Transport/Stochastic Turbulence Model // by László Könözsy
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-13543-8
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (152 pages)
Collana	Fluid Mechanics and Its Applications, , 0926-5112 ; ; 120
Disciplina	532.0527015118
Soggetti	Fluid mechanics Fluids Computer science - Mathematics Probabilities Engineering Fluid Dynamics Fluid- and Aerodynamics Computational Science and Engineering Probability Theory and Stochastic Processes
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	1 Introduction -- 1.1 Historical Background and Literature Review -- 1.2 Governing Equations of Incompressible Turbulent Flows -- 1.3 Summary -- References -- 2 Theoretical Principles and Galilean Invariance -- 2.1 Introduction -- 2.2 Basic Principles of Advanced Turbulence Modelling -- 2.3 Summary -- References -- 3 The k-w Shear-Stress Transport (SST) Turbulence Model -- 3.1 Introduction -- 3.2 Mathematical Derivations -- 3.3 Governing Equations of the k-w SST Turbulence Model -- 3.4 Summary -- References -- 4 Three-Dimensional Anisotropic Similarity Theory of Turbulent Velocity Fluctuations -- 4.1 Introduction -- 4.2 Similarity Theory of Turbulent

Oscillatory Motions -- 4.3 Summary -- References -- 5 A New Hypothesis on the Anisotropic Reynolds Stress Tensor -- 5.1 Introduction -- 5.2 The Anisotropic Reynolds Stress Tensor -- 5.3 An Anisotropic Hybrid k-w SST/STM Closure Model for Incompressible Flows -- 5.4 Governing Equations of the Anisotropic Hybrid k-w SST/STM Closure Model -- 5.5 On the Implementation of the Anisotropic Hybrid k-w SST/STM Turbulence Model -- 5.6 Summary -- References -- Appendices: Additional Mathematical Derivations -- A.1 The Unit Base Vectors of the Fluctuating Orthogonal Coordinate System -- A.2 Galilean Invariance of the Unsteady Fluctuating Vorticity Transport Equation -- A.3 The Deviatoric Part of the Similarity Tensor.

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Sommario/riassunto

This book gives a mathematical insight--including intermediate derivation steps--into engineering physics and turbulence modeling related to an anisotropic modification to the Boussinesq hypothesis (deformation theory) coupled with the similarity theory of velocity fluctuations. Through mathematical derivations and their explanations, the reader will be able to understand new theoretical concepts quickly, including how to put a new hypothesis on the anisotropic Reynolds stress tensor into engineering practice. The anisotropic modification to the eddy viscosity hypothesis is in the center of research interest, however, the unification of the deformation theory and the anisotropic similarity theory of turbulent velocity fluctuations is still missing from the literature. This book brings a mathematically challenging subject closer to graduate students and researchers who are developing the next generation of anisotropic turbulence models. Indispensable for graduate students, researchers and scientists in fluid mechanics and mechanical engineering.

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