1. Record Nr. UNINA9910457235803321 Autore Ogawa Kohei Titolo Chemical engineering [[electronic resource]]: a new perspective // Kohei Ogawa Amsterdam,: Elsevier, 2007 Pubbl/distr/stampa **ISBN** 1-281-01304-8 9786611013042 0-08-049421-8 Edizione [1st ed.] Descrizione fisica 1 online resource (191 p.) Disciplina 660.01 Chemical engineering Soggetti Entropy (Information theory) Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references (p. [167]-169) and index. Nota di bibliografia Nota di contenuto Front Cover; Chemical Engineering A New Perspective; Copyright Page; Table of Contents; List of Figures; List of Tables; Preface; Chapter 1 Information Entropy; 1.1 Introduction; 1.2 History and expectation; 1.3 Information: 1.4 Amount of information: 1.5 Average amount of information before reporting the result; 1.6 Information entropy based on continuous variable; 1.7 Probability density distribution function for the maximum information entropy; 1.8 Sensitiveness of human experience for quantity and information entropy; 1.9 Summary; Chapter 2 Mixing Phenomena; 2.1 Introduction 2.2 Index for evaluation of mixing performance 2.3 Evaluation of mixing performance based on transition response method; 2.4 Evaluation of mixing performance based on transition probability of inner substance; 2.5 Evaluation of mixing performance of multi-component mixing; 2.6 Summary; Chapter 3 Separation Phenomena; 3.1 Introduction; 3.2 Definition of separation efficiency; 3.3 Summary; Chapter 4 Turbulent Phenomena: 4.1 Introduction: 4.2 Probability density distribution

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Sommario/riassunto

Chemical engineering has often been referred to as a study in methodology. Approaches in chemical engineering are determined by individual phenomena/processes, and each of these are studied individually. The phenomena that are treated in chemical engineering can be classified into two groups:(1) phenomena that are definite and can be expressed by formulas such as differential equations (2) phenomena that can be expressed only by probability terms. The focus of Chemical Engineering - A new Perspective is on ""information entropy"". The main themes covered are mixing, separation, tur