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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 function for velocity fluctuation; 4.3 Energy spectrum probability density distribution function 4.4 Scale of turbulence and turbulent diffusion 4.5 Scale-up; 4.6 Energy spectrum density distribution function of non-Newtonian liquid; 4.7 Summary; Chapter 5 Particle Size Distribution; 5.1 Introduction; 5.2

Particle size probability density distribution function (PSD function); 5.3 Eddy size distribution in a turbulent flow; 5.4 Summary; Chapter 6 Anxiety/Expectation; 6.1 Introduction; 6.2 Safety and anxiety; 6.3 Evaluation index of anxiety/expectation; 6.4 Utilization method and usefulness of newly defined degree of anxiety; 6.5 Decision-making regarding daily insignificant matters
6.6 SummaryReferences; Epilogue; Index

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
