1. Record Nr. UNINA9910616367103321 Autore Chiang Pen-Chi Titolo Air Pollution Control and Design / / by Pen-Chi Chiang, Xiang Gao Pubbl/distr/stampa Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2022 **ISBN** 981-13-7488-0 Edizione [1st ed. 2022.] Descrizione fisica 1 online resource (690 pages) 363.7 Disciplina Soggetti **Ecology** Energy policy Environmental sciences - Social aspects **Business** Management science **Environmental Sciences** Energy Policy, Economics and Management **Environmental Social Sciences Business and Management** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1. Air Pollution Control: SOx Control -- Chapter 2. NOx Control -- Chapter 3. VOCs Control -- Chapter 4. PM2.5 Control --Chapter 5. CO2 Control -- Chapter 6. Fundamentals of Energy Utilization: Sustainable Energy -- Chapter 7. Thermal Dynamics and Heat Transfer -- Chapter 8. Advanced Combustion -- Chapter 9. Energy Materials -- Chapter 10. Integrated Energy Systems -- Chapter 11. Gaseous Control and Design: Adsorption -- Chapter 12. Absorption -- Chapter 13. Combustion -- Stack -- Chapter 14. Particulate Control and Design -- Chapter 15. Cyclone -- Chapter 16. Wet Scrubber --Chapter 17. Baghouse Filter -- Chapter 18. Electrostatic Precipitator --Chapter 19. Prospective and Perspective. Sommario/riassunto This book focuses specifically on the environmental issues related to the air pollution control and design. It is divided into four parts: (1)

Fundamentals of air pollution control, (2) fundamentals of energy utilization, (3) gaseous control and design, and (4) particulate control

and design, each consisting of four to six chapters. The topics covered in this book not only introduce the basic concepts of air pollution control and design but also address the fundamentals of energy utilization in the context of good engineering practice and policy instruments. It also features several innovative technologies and integrated methodologies relating to gaseous and particulate matter control and design. To facilitate technology integration and meet the need for comprehensive information on sustainable development, the book discusses a wide range of areas concerning the principles, applications, and assessment of air pollution control and design and thermodynamics, heat transfer, advanced combustion and renewable energy for energy utilization. It also features regulations and policy instruments adopted around the globe as well as several case studies. Presenting the emerging challenges, new concepts, innovative methodologies, and resolving strategies, as well as illustrative and inspiring case studies, it appeals to a wide range of readers, such as researchers, graduate students, engineers, policy makers, and entrepreneurs. .