

1. Record Nr.	UNINA9910780135203321
Titolo	Beyond the molecular frontier [[electronic resource]] : challenges for chemistry and chemical engineering / / Committee on Challenges for the Chemical Sciences in the 21st Century, Board on Chemical Sciences and Technology, National Research Council of the National Academies
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, c2003
ISBN	0-309-16839-2 1-280-18349-7 9786610183494 0-309-50512-7
Descrizione fisica	1 online resource (238 p.)
Disciplina	540/.72/073
Soggetti	Chemical engineering - Research - United States Chemistry - Research - United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Introduction -- 2. The structures and cultures of the disciplines: the common chemical bond -- 3. Synthesis and manufacturing: creating and exploiting new substances and new transformations -- 4. Chemical and physical transformations of matter -- 5. Isolating, identifying, imaging, and measuring substances and structures -- 6. Chemical theory and computer modeling from computational chemistry to process systems engineering -- 7. The interface with biology and medicine -- 8. Materials design -- 9. Atmospheric and environmental chemistry -- 10. Energy: providing for the future -- 11. National and personal security -- 12. How to achieve these goals.