Record Nr. UNINA9910784597503321 Bioprocesses for value-added products from renewable resources **Titolo** [[electronic resource]]: new technologies and applications / / edited by Shang-Tian Yang Amsterdam;; Boston, MA,: Elsevier, 2006 Pubbl/distr/stampa **ISBN** 1-280-72921-X 9786610729210 0-08-046671-0 Descrizione fisica 1 online resource (685 p.) Classificazione 58.31 Altri autori (Persone) YangShang-Tian 660.6/3 Disciplina Soggetti Biochemical engineering Biotechnological process control Renewable natural resources Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover; Preface; 2. Applications of genomic and proteomic analyses; 3. Bioprocess analysis and optimization guided by genomic and proteomic analyses: The example of microbial production of 1,3propanediol; 4. Concluding remarks and outlook; References; 2. Directed evolution tools for diversity generation; 3. Applications of directed evolution tools; 4. Alternatives to directed evolution; 5. Conclusion; Acknowledgements; References; 2. Applications and some examples: 3. Metabolic engineering strategies and limitations: 4. Metabolic engineering methodologies and tools 5. Challenges and new approaches for metabolic engineering 6. Summary: References: 2. Amylase and cellulase classification and

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Sommario/riassunto

Bioprocessing for Value-Added Products from Renewable Resources provides a timely review of new and unconventional techniques to manufacture high-value products based on simple biological material. The current source for most chemicals and materials is petroleum. Anticipation of its limited future availability, along with record high prices has spurred interest in alternatives that will be both sustainable and cost-effective. In a very structured way this book begins by describing the modern technologies that form the basis for creating a bio-based industry. Next it lists the various