1. Record Nr. UNINA9910253975503321

Autore	Chen Bin
Titolo	Biogas Systems in China / / by Bin Chen, Tasawar Hayat, Ahmed Alsaedi
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2017
ISBN	3-662-55498-4
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXIII, 151 p. 41 illus., 5 illus. in color.)
Disciplina	621.042
Soggetti	Renewable energy resources Environmental management Agriculture Renewable and Green Energy Environmental Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Biogas: A introduction -- History of biogas in China -- Fundamental of science and engineering of biogas production -- Comprehensive utilization types of Biogas in China -- Energy balance of biogas production systems -- Biogas and environmental emissions—Life cycle analysis -- Economic analysis of biogas production systems -- Sustainability of complex biogas systems -- Future development of biogas in China.
Sommario/riassunto	This book derives an explicit analytical pattern (or framework) that permits the examination and optimization of biogas production systems. It provides a concise overview of the current status of biogas and biogas coupled agricultural systems in China, and introduces evaluation methods for energy efficiency, environmental emissions, economic performance and sustainability assessment approaches. Based on empirical studies, it also explores future options for the system development by focusing on emissions mitigation, biogas energy efficiency and system sustainability. Systematic methods of life cycle assessment and thermodynamic analysis may provide new angles for biogas system evaluation. The system discussed is not only a biogas producer, but also a biogas-linked ecological agricultural

system, which has the potential to broaden the applicable scopes of renewable energy and eco-agricultural management. The comprehensive, in-depth knowledge and experience presented provide new analytical approaches for researchers in relevant fields and shed light on the construction and operation of emerging anaerobic digestion and biogas industries. This book is a valuable resource for researchers focusing on biogas system modeling, project managers and policymakers.