

1. Record Nr.	UNINA9910298348203321
Titolo	Near-critical and Supercritical Water and Their Applications for Biorefineries // edited by Zhen Fang, Chunbao (Charles) Xu
Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 2014
ISBN	94-017-8923-1
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (481 p.)
Collana	Biofuels and Biorefineries, , 2214-1537 ; ; 2
Disciplina	662.88
Soggetti	Renewable energy sources Biomass energy Forest products Renewable and Green Energy Wood Science & Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Fundamentals of Supercritical Water -- Reactor Design -- Near-critical and Supercritical Water Applications.
Sommario/riassunto	The book provides fundamental chemistry and properties of near-critical water (NCW) and supercritical water (SCW), criteria and challenges/solutions in reactor design for NCW and SCW processes, and up-to-date reviews and practice of a wide range of their applications in biorefineries including: production of hydrochars from biomass, SCW oxidation (SCWO) for waste treatment, SCW gasification (SCWG) of biomass and waste for hydrogen and methane production, hydrothermal liquefaction of biomass, production of chemicals, and SCWO of biofuels for energy. It also presents techno-economic analysis of hydrogen production via SCWG of biomass. The book will be highly essential for both academic researchers and industrial practitioners for developing novel biorefinery technologies and processes employing NCW or SCW for treatment of various organic waste streams and production of bio-energy and bio-based chemicals from bio-renewable resources. Prof. Dr. Zhen Fang is leader and founder of biomass group, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, China. Dr. Chunbao (Charles) Xu is currently an Associate

Professor of Chemical Engineering and NSERC/FPIInnovations Industrial  
Research Chair in Forest Biorefinery at Western University, Canada.

---