

1. Record Nr.	UNINA9910298610303321
Autore	Arandiyan Hamidreza
Titolo	Methane Combustion over Lanthanum-based Perovskite Mixed Oxides / / by Hamidreza Arandiyan
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-46991-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (123 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190- 5053
Disciplina	549.528
Soggetti	Catalysis Nanotechnology Environmental sciences Chemical engineering Environmental Science and Engineering Industrial Chemistry/Chemical Engineering
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	Introduction -- Research background -- Catalytic combustion over cheaper metal oxides -- Catalytic combustion of methane over 1D LSCO nanowires -- Catalytic combustion of methane over 3DOM LSMO with high surface areas -- Catalytic combustion of methane over 3DOM LSMO supported Ag NPs. .
Sommario/riassunto	This book presents current research into the catalytic combustion of methane using perovskite-type oxides (ABO ₃). Catalytic combustion has been developed as a method of promoting efficient combustion with minimum pollutant formation as compared to conventional catalytic combustion. Recent theoretical and experimental studies have recommended that noble metals supported on (ABO ₃) with well- ordered porous networks show promising redox properties. Three- dimensionally ordered macroporous (3DOM) materials with interpenetrated and regular mesoporous systems have recently triggered enormous research activity due to their high surface areas, large pore volumes, uniform pore sizes, low cost, environmental

benignity, and good chemical stability. These are all highly relevant in terms of the utilization of natural gas in light of recent catalytic innovations and technological advances. The book is of interest to all researchers active in utilization of natural gas with novel catalysts. The research covered comes from the most important industries and research centers in the field. The book serves not only as a text for researcher into catalytic combustion of methane, 3DOM perovskite mixed oxide, but also explores the field of green technologies by experts in academia and industry. This book will appeal to those interested in research on the environmental impact of combustion, materials and catalysis.
