1.	Record Nr.	UNINA9910877294903321
	Titolo	Magma to microbe : modeling hydrothermal processes at ocean spreading centers / / Robert P. Lowell [et al.], editors
	Pubbl/distr/stampa	Washington, D.C., : American Geophysical Union, c2008
	ISBN	1-118-66635-6 1-118-67257-7
	Descrizione fisica	1 online resource (295 p.)
	Collana	Geophysical monograph ; ; 178
	Altri autori (Persone)	LowellRobert P
	Disciplina	551.1/36
	Soggetti	Hydrothermal circulation (Oceanography) - Mathematical models Seawater - Thermodynamics - Mathematical models Hydrothermal vents - Microbiology Mid-ocean ridges Sea-floor spreading
	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 and index.
	Nota di contenuto	Title Page; Contents; Preface; Modeling Hydrothermal Processes at Ocean Spreading Centers: Magma to Microbe-An Overview; Modeling Multiphase, Multicomponent Processes at Oceanic Spreading Centers; The Supply of Heat to Mid-Ocean Ridges by Crystallization and Cooling of Mantle Melts; Seismological Constraints on Magmatic and Hydrothermal Processes at Mid-Ocean Ridges; Modeling Hydrothermal Response to Earthquakes at Oceanic Spreading Centers; The Chemistry of Diffuse-Flow Vent Fluids on the Galapagos Rift Hydrothermal Fluid Composition at Middle Valley, Northern Juan de Fuca Ridge: Temporal and Spatial VariabilityReactive Transport and Numerical Modeling of Seafloor Hydrothermal Systems: A Review; Observational, Experimental, and Theoretical Constraints on Carbon Cycling in Mid-Ocean Ridge Hydrothermal Systems; Modeling the Impact of Diffuse Vent Microorganisms Along Mid-Ocean Ridges and Flanks; Magma-to-Microbe Networks in the Context of Sulfide Hosted Microbial Ecosystems; Processes and Interactions in Macrofaunal Assemblages at Hydrothermal Vents: A Modeling Perspective The Role of Seafloor Hydrothermal Systems in the Evolution of Seawater

	CompositionDuring the PhanerozoicIndex
Sommario/riassunto	Published by the American Geophysical Union as part of the Geophysical Monograph Series, Volume 178.Hydrothermal systems at oceanic spreading centers reflect the complex interactions among transport, cooling and crystallization of magma, fluid circulation in the crust, tectonic processes, water-rock interaction, and the utilization of hydrothermal fluids as a metabolic energy source by microbial and macro-biological ecosystems. The development of mathematical and numerical models that address these complex linkages is a fundamental part the RIDGE 2000 program that attempts to quant