

**THE LITHOSPHERE: GEOCHEMISTRY,  
GEOLOGY AND GEOPHYSICS**

**JAROD E. ANDERSON  
AND  
ROBERT W. COATES  
EDITORS**

**Nova Science Publishers, Inc.**  
*New York*

## CONTENTS

<b>Preface</b>		vii
<b>Chapter 1</b>	The Early Earth and Formation of the Lithosphere <i>Arkady Pilchin and Lev Eppelbaum</i>	1
<b>Chapter 2</b>	Continental and Oceanic Lithosphere Structure from the Long-Range Seismic Profiling <i>N.I. Pavlenkova</i>	69
<b>Chapter 3</b>	The Fate of Subducted Oceanic Crust and the Origin of Intraplate Volcanism <i>Alan D. Smith</i>	123
<b>Chapter 4</b>	Helium Isotope Variations along the Niigata-Kobe Tectonic Zone, Central Japan <i>Koji Umeda, Atsui Ninomiya, Koji Shimada and Junichi Nakajima</i>	141
<b>Chapter 5</b>	Volatiles in the Mantle Lithosphere: Modes of Occurrence and Chemical Compositions <i>Mingjie Zhang, Yaoling Niu and Peiqing Hu</i>	171
<b>Chapter 6</b>	Deformable Lithospheric Plates: Controlling Action of Netlike Plastic-Flow <i>Sheng-zu Wang</i>	213
<b>Chapter 7</b>	Elastic-Anelastic Properties of the Aegean Lithosphere- Asthenosphere Inferred from Long Period Rayleigh Waves <i>I. Kassaras, F. Louis, K. Makropoulos, A. Magganas and D. Hatzfeld</i>	267
<b>Chapter 8</b>	Space and Time Variations of Elastic and Anelastic Properties in the Shallow Lithosphere <i>C. Chiarabba and P. De Gori</i>	295

---

<b>Chapter 9</b>	<b>The Magnetic Lithosphere: A Novel View</b>	<b>317</b>
	<i>Mioara Manda and Vincent Lesur</i>	
<b>Chapter 10</b>	<b>Paleoshorelines and the Evolution of the Lithosphere of Mars</b>	<b>345</b>
	<i>Javier Ruiz, Rosa Tejero, David Gómez-Ortiz and Valle López</i>	
<b>Index</b>		<b>369</b>