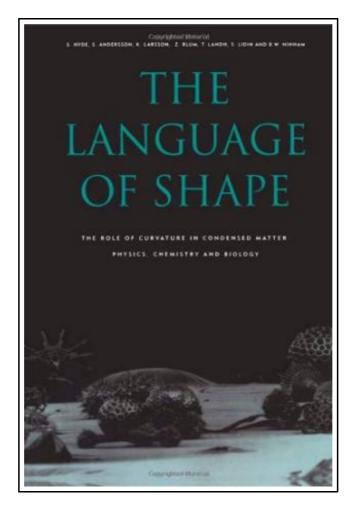
The Language of Shape: The Role of Curvature in Condensed Matter: Physics, Chemistry and Biology (Hardback)



Filesize: 7.68 MB

Reviews

Absolutely one of the best ebook We have possibly go through. I was able to comprehended every thing using this published e book. Its been developed in an extremely straightforward way and it is merely soon after i finished reading through this ebook where basically transformed me, change the way i really believe.

(Ms. Zaria Kertzmann MD)

THE LANGUAGE OF SHAPE: THE ROLE OF CURVATURE IN CONDENSED MATTER: PHYSICS, CHEMISTRY AND BIOLOGY (HARDBACK)



ELSEVIER SCIENCE TECHNOLOGY, United Kingdom, 1996. Hardback. Book Condition: New. Reprinted from Erkenntnis, 45: ed.. 241 x 170 mm. Language: English . Brand New Book. This book develops the thesis that structure and function in a variety of condensed systems - from the atomic assemblies in inorganic frameworks and organic molecules, through molecular self-assemblies to proteins - can be unified when curvature and surface geometry are taken together with molecular shape and forces. An astonishing variety of synthetic and biological assemblies can be accurately modelled and understood in terms of hyperbolic surfaces, whose richness and beauty are only now being revealed by applied mathematicians, physicists, chemists and crystallographers. These surfaces, often close to periodic minimal surfaces, weave and twist through space, carving out interconnected labyrinths whose range of topologies and symmetries challenge the imaginative powers. The book offers an overview of these structures and structural transformations, convincingly demonstrating their ubiquity in covalent frameworks from zeolites used for cracking oil and pollution control to enzymes and structural proteins, thermotropic and lyotropic bicontinuous mesophases formed by surfactants, detergents and lipids, synthetic block copolymer and protein networks, as well as biological cell assemblies, from muscles to membranes in prokaryotic and eukaryotic cells. The relation between structure and function is analysed in terms of the previously neglected hidden variables of curvature and topology. Thus, the catalytic activity of zeolites and enzymes, the superior material properties of interpenetrating networks in microstructured polymer composites, the transport requirements in cells, the transmission of nerve signals and the folding of DNA can be more easily understood in the light of this. The text is liberally sprinkled with figures and colour plates, making it accessible to both the beginning graduate student and researchers in condensed matter physics and chemistry, mineralogists, crystallographers and biologists.

- Read The Language of Shape: The Role of Curvature in Condensed Matter: Physics, Chemistry and Biology (Hardback) Online
- Download PDF The Language of Shape: The Role of Curvature in Condensed Matter: Physics, Chemistry and Biology (Hardback)

Related eBooks



The Web Collection, Revealed: Adobe Creative Cloud Update (Mixed media product)

Cengage Learning, Inc, United States, 2013. Mixed media product. Book Condition: New. Premium ed. 241 x 193 mm. Language: English . Brand New Book. Your Adobe Creative Cloud package includes two components: 1) Online access...

Read eBook »



Children's Educational Book Junior Leonardo Da Vinci: An Introduction to the Art, Science and Inventions of This Great Genius Age 7 8 9 10 Year-Olds. [British English] (Paperback)

Createspace, United States, 2013. Paperback. Book Condition: New. 248 x 170 mm. Language: English . Brand New Book ***** Print on Demand *****. ABOUT SMART READS for Kids . Love Art, Love Learning Welcome. Designed to...

Read eBook »



Hope for Autism: 10 Practical Solutions to Everyday Challenges (Paperback)

Seaborough Enterprises Publishing, United States, 2015. Paperback. Book Condition: New. Initial ed.. 203 x 127 mm. Language: English . Brand New Book ***** Print on Demand *****. Hope for Autism: 10 Practical Solutions to Everyday...

Read eBook »



Star Flights Bedtime Spaceship: Journey Through Space While Drifting Off to Sleep

CreateSpace Independent Publishing Platform, 2013. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: "Star Flights Bedtime Spaceship" is a charming and fun story with the purpose to help children...

Read eBook »



Slavonic Rhapsodies, Op.45 / B.86: Study Score (Paperback)

Petrucci Library Press, United States, 2015. Paperback. Book Condition: New. 244 x 170 mm. Language: English Brand New Book ***** Print on Demand *****. The first of the three Slovanske rapsodie was composed from February 13...

Read eBook »