

This first comprehensive overview of the modern aspects of biomineralization represents life and materials science at its best. Bioinspired pathways are the hot topics in many disciplines and this holds especially true for biomineralization.

Here, the editor has assembled an international team of renowned authors to provide first-hand research results.

This first of three volumes deals with the biology of biominerals structure formation, with sections on silica-hydrated polysilcondioxide, iron sulfides and oxides, calcium carbonates and sulfates, as well as calcium phosphates. Mechanisms of biominerals biosyntheses are now being achieved by molecular biology methods.

An interdisciplinary must-have account, for biochemists, bioinorganic chemists, lecturers in chemistry and biochemistry, materials scientists, biologists, and solid state physicists.



*Edmund Baeuerlein was born in 1932 in Höchst (Germany). He studied chemistry in Saarbrücken, Munich and Frankfurt (Germany) and he completed his PhD with Prof. Th. Wieland on biologically relevant hydroquinones. He then moved to the Max-Planck-Institut for medical research, Heidelberg (Germany), as a research group leader. He completed his Habilitation at the chemistry department of the University of Heidelberg in 1974, where he was appointed Professor in 1980. In 1984 he moved to the Max-Planck-Institut for biochemistry in Munich, department of membrane biochemistry, where he was research group leader until 1997. Apart from having published numerous scientific papers, he edited in 2000 a first book on Biomineralization – From Biology to Biotechnology and Medical Application and in 2004 a second one on Biomineralization – Progress in Biology, Molecular Biology and Application. Both editions were published with the intention to direct attention to the rapidly growing importance of molecular biology methods in biomineralization.*