
Contents

Magneto-Aerotaxis R. B. Frankel · T. J. Williams · D. A. Bazylinski	1
Diversity and Taxonomy of Magnetotactic Bacteria R. Amann · J. Peplies · D. Schüler	25
Ecophysiology of Magnetotactic Bacteria D. A. Bazylinski · T. J. Williams	37
Geobiology of Magnetotactic Bacteria S. L. Simmons · K. J. Edwards	77
Structure, Behavior, Ecology and Diversity of Multicellular Magnetotactic Prokaryotes C. N. Keim · J. Lopes Martins · H. L. de Barros · U. Lins · M. Farina . . .	103
Genetic Analysis of Magnetosome Biomineralization C. Jogler · D. Schüler	133
Cell Biology of Magnetosome Formation A. Komeili	163
Mineralogical and Isotopic Properties of Biogenic Nanocrystalline Magnetites D. Faivre · P. Zuddas	175
Characterization of Bacterial Magnetic Nanostructures Using High-Resolution Transmission Electron Microscopy and Off-Axis Electron Holography M. Pósfai · T. Kasama · R. E. Dunin-Borkowski	197
Molecular Bioengineering of Bacterial Magnetic Particles for Biotechnological Applications T. Matsunaga · A. Arakaki	227

Paleomagnetism and Magnetic Bacteria

M. Winklhofer · N. Petersen 255

Formation of Magnetic Minerals by Non-Magnetotactic Prokaryotes

V. S. Coker · R. A. D. Pattrick · G. van der Laan · J. R. Lloyd 275

Magnetite-Based Magnetoreception in Higher Organisms

M. Winklhofer 301

Subject Index 315

Magnetoreception and Magnetosomes in Bacteria

Schüler, D. (Ed.)

2007, VIII, 319 p., Hardcover

ISBN: 978-3-540-37467-1