Emerging Topics in Physical Virology is a state-of-the-art account of recent advances in the experimental analysis and modeling of structure, function and dynamics of viruses. This is the first interdisciplinary book that integrates a review of relevant experimental techniques, such as cryo-electron microscopy, atomic force microscopy and mass spectrometry with the latest results on the biophysical and mathematical modeling of viruses. The book comprehensively covers the structure and physical properties of the protein envelopes that encapsulate and hence protect the delicate viral genome, their assembly and disassembly, the organization of the viral genome, infection, evolution, as well as applications of viruses in Biomedical Nanotechnology. It is an essential primer for scientists working in all aspects of virology, including the increasing use of viruses and virus-like particles in bio- and nano-technology. Its review style makes it moreover suitable for non-experts as an introduction into this exciting research area.