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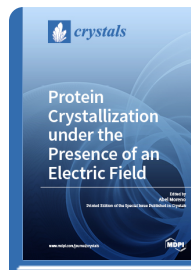
Protein Crystallization under the Presence of an Electric Field

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This book entitled “**Protein Crystallization under the Presence of an Electric Field**” covers recent trends and original contributions on the use of electric fields (internal and external) for applications for nucleation control and the effect on the kinetics of crystallization processes. This book also includes basic strategies for growing crystals of biological macromolecules for characterization via X-ray and neutron diffraction as well as using modern X-ray-free electron-lasers. There are six main topics covered on this book, including recent insights into the crystallization process from nucleation and growth peculiarities, when using different kinds of electric fields; the effect of external electric fields on the kinetics of the dislocation-free growth of model proteins; the use of very strong external electric fields for the crystallization of a model protein glucose isomerase; and the use of alternant electric fields using different kinds of pulses and their combination with strong magnetic fields. There are also contributions related to applications in developing electron-transfer devices as well as graphene-based platforms for electrocrystallization and in situ X-ray diffraction characterization.

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