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Autore	Lu Jiangfeng
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Nota di contenuto	General Introduction -- High Performance All Solid State Proton Rectifier Using a Heterogeneous Membrane Composed of Coordination Polymer and Layered Double Hydroxide.-Robust Proton Conduction against Mechanical Stress in Flexible Free Standing Membrane Composed of Two Dimensional Coordination Polymer -- Proton Conducting Behavior in Flexible Coordination Polymer Free-Standing Membranes -- General Conclusion.
Sommario/riassunto	This book investigates the development of high proton conduction properties free-standing two-dimensional coordination polymer membranes, with the goal of elucidating the mechanical flexibility,

proton conduction behavior, and structural characteristics of these materials under varying environmental conditions. The book evaluates the possible uses of these membranes in flexible electronics and energy technologies and thoroughly examines proton conduction mechanisms using an interdisciplinary research approach that combines chemistry, physics, materials science, and engineering. The most recent scientific developments in novel proton conduction materials are covered, along with preparation and structural characterization procedures and their possible uses in energy, environmental, and electronic technology applications. The research findings presented are extremely important for advancing the creation of clean energy technologies and tackling the problem of climate change. They are also especially relevant given the rising demand for sustainable energy technologies throughout the world.

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