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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	The evolution of fuel cells and their components -- Degradation mechanism of perfluorinated membranes -- Ranking the stability of perfluorinated membranes to attack by hydroxyl radicals -- Stabilization of perfluorinated membranes using Ce <sup>3+</sup> and Mn <sup>2+</sup> redox scavengers: mechanism and applications -- Hydrocarbon proton exchange membranes -- Stabilization of perfluorinated membranes using nanoparticle additives -- Degradation mechanism in aquivion perfluorinated membranes and stabilization strategies -- Anion exchange membrane: stability and synthetic approach -- Profiling of membrane degradation processes in a fuel cell by 2D spectral-spatial FTIR-- Quantum mechanical calculation of the degradation in perfluorinated membranes used in fuel cells.