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Sommario/riassunto	This book is a collation of articles published in the Special Issue "CESE-2019: Applications of Membranes" in the journal Sustainability. It contains a wide variety of topics such as the removal of trace organic contaminants using combined direct contact membrane distillation–UV photolysis; evaluating the feasibility of forward osmosis in diluting reverse osmosis concentrate; tailoring the effects of titanium dioxide (TiO <sub>2</sub> ) and polyvinyl alcohol (PVA) in the separation and antifouling performance of thin-film composite polyvinylidene fluoride (PVDF) membrane; enhancing the antibacterial properties of PVDF membrane by surface modification using TiO <sub>2</sub> and silver nanoparticles; and reviews on membrane fouling in membrane bioreactor (MBR) systems and recent advances in the prediction of fouling in MBRs. The book is suitable for postgraduate students and researchers working in the field of membrane applications for treating aqueous solutions.