



## The Swelling and Doping of Polyelectrolyte Multilayers

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | From Theory to Applications | This book attempts to provide insight into the mixing, hydration and annealing of self-assembled, multilayered films based on precise counting of their doping ions and water content. Several practical applications are then explained in light of this theory. Polyelectrolyte multilayers are ideal mixes forming amorphous films. While the properties of ordered organic monomolecular layers such as liquid crystals or amphiphiles can be dominated by the nature of a few defects, in disordered systems the overall amorphous nature not only defines their properties but also makes the materials less sensitive to details of the preparation process. Charged polymer chains are entropically driven to interact electrostatically based on the concentration of small ions in solution. Their hydration can be used to extrapolate a universal doping parameter which can be used to better characterize and classify any existing ionic dopants and films. These films can be used to control the electroluminescence of ruthenium bipyridine based on its controlled diffusion to a coated platinum electrode. They can also inhibit corrosion of metals by shielding of harmful ions in solutions. | Format: Paperback | Language/Sprache: english | 180 pp.



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