

A wide variety of polyelectrolytes have been utilized in the formation of polyelectrolyte multilayers (PEMs) over polymer membranes using widely accepted layer-by-layer (LbL) deposition technique. This allows the gradual and controlled build-up of electrostatically cross linked films of polycation-polyanion layers. Thus PEMs can offer nano level films with high flux and selectivity for membrane separations. This nano skin over membranes has totally changed the properties of membrane systems and makes it suitable for applications such as water treatment, softening, brackish water reclamation, and dye-salt separations. This layer-by-layer (LbL) modification readily converts polymeric ultra filtration membranes into materials capable of nano filtration. The book discusses about the modification of polymer membranes with different PEMs, its characterization and application with special reference to water purification.

Polyelectrolyte multilayer (PEM) polymer membranes



Nikhil Chandra P.



Dr. Nikhil Chandra P. Assistant Professor, Research and PG department of Chemistry, Sree Narayana College, Kollam-691001, India.

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Modification, characterization and application



978-620-0-46933-5

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 **LAMBERT**
Academic Publishing

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Book Details:

ISBN-13:	978-620-0-46933-5
ISBN-10:	6200469334
EAN:	9786200469335
Book language:	English
By (author) :	Nikhil Chandra P.
Number of pages:	164
Published on:	2019-11-12
Category:	Chemistry