1. Record Nr. UNINA9910760286903321 Autore H Akhina Titolo Poly(Vinyl Chloride) Based Composites and Nanocomposites / / edited by Akhina H, Thomas Sabu Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2024 **ISBN** 3-031-45375-1 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (360 pages) Collana Engineering Materials, , 1868-1212 Altri autori (Persone) SabuThomas Disciplina 620.118 Soggetti Composite materials Nanotechnology Composites Nanoscale Design, Synthesis and Processing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Polyvinylchloride, Its composites and nanocomposites: State of art, new Nota di contenuto challenges and opportunities -- Synthesis, morphology, structure and properties of PVC -- Micro and nano fillers for PVC -- Surface modification of fillers -- Fabrication of PVC based composites and nanocomposites by mechanical mixing -- Fabrication of PVC based composites and nanocomposites by solution mixing -- Fabrication of PVC based composites and nanocomposites by latex stage mixing --Fabrication of PVC based composites and nanocomposites by freeze drying -- Interface modification and characterization of PVC based composites and nanocomposites -- Natural fibre reinforced PVC composites and nanocomposites -- Chitin and chitosan based PVC composites and nanocomposites -- Carbon fibre and carbon black reinforced PVC composites and nanocomposites -- Clay reinforced PVC composites and Nanocomposites -- Mica and Glass fibre filled PVC composites -- Conducting PVC composites and nanocomposites --

Metal oxide reinforced PVC composites and nanocomposites -- Silica reinforced PVC composites and nanocomposites -- Nanocomposites of PVC with graphene -- POSS reinforced PVC nanocomposites -- Metal carbonate reinforced PVC composites and nanocomposites -- Metal particle filled PVC composites and nanocomposites -- Nanocomposite

of PVC with CNT -- Composites and nanocomposites of PVC with hybrid fillers -- Rheological behavior of PVC composites and Nanocomposites -- Microscopy of PVC composites and Nanocomposites -- Morphology -property correlation in PVC based composites and nanocomposites -- Mechanical properties of PVC composites and nanocomposites -- Viscoelastic characterization of PVC composites and nanocomposites -- Scattering (X-ray, light, neutron) PVC composites and nanocomposites -- Thermal properties -- PVC composites and nanocomposites -- Spectroscopy of PVC composites and nanocomposites -- Prov -- Dielectric properties PVC composites and nanocomposites -- Barrier properties of PVC based composites and nanocomposites -- Aging behavior of PVC based composites and nanocomposites -- Fire retardant PVC based composites and nanocomposites -- Possible interaction of PVC with micro and nanofillers -- Antistatic PVC nanocomposites -- Glass transition temperature of PVC based composites and nanocomposites -- Applications of PVC based composites and nanocomposites.

## Sommario/riassunto

This book covers Poly(vinyl chloride) Fundamentals, Fabrication and characterization of PVC based composites and nanocomposites specifically natural fibre reinforced PVC composites, carbonaceous filler reinforced PVC composites, metal oxide fled PVC composites and nanocomposites etc. This book also covers the conducting PVC composites and recent advances in nanocomposites based on PVC .The rheological, mechanical, barrier, thermal, dielectric behaviour of PVC composites and nanocomposites are discussed in details.