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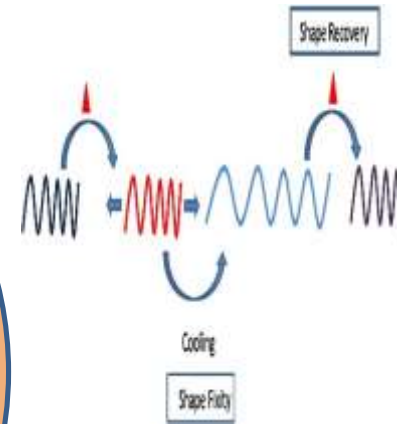
Research Expertise

***Fabric Engineering ,Functional
Textiles ,Medical Textiles
,Textile /Polymer Physics and
Mechanics***

MODIFICATION OF SHAPE MEMORY FILAMENT BY NANO- SCALE DESIGN

Research Expertise

***Functional Materials ,Functional
and Smart Membranes,
Membranes for Energy
Applications, Separation and
Purification Application***



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Shape memory materials are ruling the era with their smart properties. The shape memory polymers play with their functional segments to incorporate shape memory mechanism into the materials. The functional segment basically consists of hard and soft segments which is responsible for shape memory programming and recovery. With the advancement of technology shape memory material has also made a step towards the field of textile. With high value of recoverability, excellent elastic properties and 500-600% elongation at break PU-Urea filaments have created a huge market with smart memory resources for sutures, sports-wear, woven, biomedical etc. Modification with fillers, can drive a rise in storage modulus as fillers behave as strong reinforcements with hard segment interaction. The present research is addressing the problems during such functional modification and their effect and detail study on Shape memory properties both in film and filaments. The research is highly interdisciplinary in nature and involves the relevant research expertise of a polymer/textile engineer and a chemist.

