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Chain Orientation"; "3.3. TRANSPORT PHENOMENA IN MICROANDNANO-COMPOSITES"; "3.4. CONTINUUM MODELING OF TRANSPORTPROPERTIES OF POLYMER COMPOSITES"; "3.5. PERMEABILITY OF POLYURETHANES (PU) ANDPOLYURETHANEUREAS (PUU): STRUCTURE-PROPERTYRELATIONSHIPS"; "3.5.1. Transport Mechanisms"; "3.5.2. Effect of Soft Segment Type, Its Composition, and Molecular Weight" "3.5.3. Effect of Hard Segment Content and the Extent of Phase Separation" "3.5.4. Effect of Penetrant Type"; "3.6. PERMEABILITY OF FILLED POLYURETHANES ANDPOLYURETHANEUREAS: MICRO- AND NANOCOMPOSITES"; "3.7. IMPORTANCE OF TRANSPORT PHENOMENONIN SHAPE MEMORY POLYMERS"; "3.7.1. Importance of Mass Transfer in SMP:Actuation by Water Absorption in Surgical Procedures"; "3.7.2. Importance of Mass Transfer through SMP:Textile Fabrics and Refrigerators"; "3.8. CONCLUSIONS"; "3.9. ACKNOWLEDGEMENTS"; "REFERENCES"; "PERMEATION PROPERTIESOF EPOXY NANOCOMPOSITES"; "ABSTRACT" "4.1. INTRODUCTION" "4.2. MODELING OF THE PERMEABILITY OF NANOCOMPOSITES"; "4.3. PERMEABILITY OF EPOXY NANOCOMPOSITES"; "4.3.1. Effect of Nanoplatelet Loading"; "4.3.2. Effect of Nanoplatelet Dispersion"; "4.3.3. Effect of Nanoplatelet Aspect Ratio"; "4.3.4. Effect of Nanoplatelet Orientation"; "4.3.5. Control of Nanocomposite Morphology"; "4.4. CONCLUSIONS"; "4.5. ACKNOWLEDGMENTS"; "REFERENCES"; "BARRIER PROPERTIESOF POLYOLEFIN NANOCOMPOSITES"; "ABSTRACT"; "5.1. INTRODUCTION"; "5.2. BARRIER PROPERTIES OF POLYOLEFINNANOCOMPOSITES: EFFECT OF COMPATIBILIZER" "5.3. ROLE OF OPTIMUM CLAY MODIFICATION"
