

Igor Sics

List of Publications by Year in descending order

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57
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3249
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| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Structure Development during Shear Flow-Induced Crystallization of i-PP: In-Situ Small-Angle X-ray Scattering Study. <i>Macromolecules</i> , 2000, 33, 9385-9394. | 4.8 | 465 |
| 2 | Orientation and Crystallization of Natural Rubber Network As Revealed by WAXD Using Synchrotron Radiation. <i>Macromolecules</i> , 2004, 37, 3299-3309. | 4.8 | 273 |
| 3 | On the structure and morphology of polyvinylidene fluoride "nanoclay nanocomposites. <i>Polymer</i> , 2006, 47, 1678-1688. | 3.8 | 260 |
| 4 | New Insights into Structural Development in Natural Rubber during Uniaxial Deformation by In Situ Synchrotron X-ray Diffraction. <i>Macromolecules</i> , 2002, 35, 6578-6584. | 4.8 | 242 |
| 5 | Shear-Induced Crystallization Precursor Studies in Model Polyethylene Blends by in-Situ Rheo-SAXS and Rheo-WAXD. <i>Macromolecules</i> , 2004, 37, 4845-4859. | 4.8 | 197 |
| 6 | Low Percolation Threshold in Nanocomposites Based on Oxidized Single Wall Carbon Nanotubes and Poly(butylene terephthalate). <i>Macromolecules</i> , 2004, 37, 7669-7672. | 4.8 | 191 |
| 7 | Mechanism of strain-induced crystallization in filled and unfilled natural rubber vulcanizates. <i>Journal of Applied Physics</i> , 2005, 97, 103529. | 2.5 | 140 |
| 8 | Confinement Size Effect on Crystal Orientation Changes of Poly(ethylene oxide) Blocks in Poly(ethylene oxide)-b-polystyrene Diblock Copolymers. <i>Macromolecules</i> , 2004, 37, 3689-3698. | 4.8 | 130 |
| 9 | Perforated Layer Structures in Liquid Crystalline Rod-Coil Block Copolymers. <i>Journal of the American Chemical Society</i> , 2005, 127, 15481-15490. | 13.7 | 124 |
| 10 | Molecular orientation and structural development in vulcanized polyisoprene rubbers during uniaxial deformation by in situ synchrotron X-ray diffraction. <i>Polymer</i> , 2003, 44, 6003-6011. | 3.8 | 120 |
| 11 | Deformation-Induced Phase Transition and Superstructure Formation in Poly(ethylene terephthalate). <i>Macromolecules</i> , 2005, 38, 91-103. | 4.8 | 111 |
| 12 | Crystallization-Induced Undulated Morphology in Polystyrene-b-Poly(l-lactide) Block Copolymer. <i>Macromolecules</i> , 2004, 37, 5985-5994. | 4.8 | 99 |
| 13 | Effect of Network-Chain Length on Strain-Induced Crystallization of NR and IR Vulcanizates. <i>Rubber Chemistry and Technology</i> , 2004, 77, 711-723. | 1.2 | 89 |
| 14 | Comparison of poly(ethylene oxide) crystal orientations and crystallization behaviors in nano-confined cylinders constructed by a poly(ethylene oxide)-b-polystyrene diblock copolymer and a blend of poly(ethylene oxide)-b-polystyrene and polystyrene. <i>Polymer</i> , 2006, 47, 5457-5466. | 3.8 | 87 |
| 15 | Polymorphism of isotactic polybutene-1 as revealed by microindentation hardness. Part II: correlations to microstructure. <i>Polymer</i> , 2003, 44, 1641-1645. | 3.8 | 85 |
| 16 | Probing the Nature of Strain-Induced Crystallization in Polyisoprene Rubber by Combined Thermomechanical and In Situ X-ray Diffraction Techniques. <i>Macromolecules</i> , 2005, 38, 7064-7073. | 4.8 | 85 |
| 17 | Thermally Induced Phase Transitions and Morphological Changes in Organoclays. <i>Langmuir</i> , 2004, 20, 3746-3758. | 3.5 | 82 |
| 18 | Strain-Induced Molecular Orientation and Crystallization in Natural and Synthetic Rubbers under Uniaxial Deformation by In-situ Synchrotron X-ray Study. <i>Rubber Chemistry and Technology</i> , 2004, 77, 317-335. | 1.2 | 81 |

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|----|---|-----|-----------|
| 19 | Structural formation of amorphous poly(ethylene terephthalate) during uniaxial deformation above glass temperature. <i>Polymer</i> , 2004, 45, 905-918. | 3.8 | 81 |
| 20 | Lateral Packing of Mineral Crystals in Bone Collagen Fibrils. <i>Biophysical Journal</i> , 2008, 95, 1985-1992. | 0.5 | 77 |
| 21 | Comparison of crystallization kinetics in various nanoconfined geometries. <i>Polymer</i> , 2004, 45, 2931-2939. | 3.8 | 76 |
| 22 | Mechanism of Structural Formation by Uniaxial Deformation in Amorphous Poly(ethylene Terephthalate) Overlaid with a 50/50 Weight Ratio of Poly(ethylene Terephthalate) and Polypropylene. <i>Journal of Polymer Science: Part B: Polymer Physics</i> , 2010, 48, 622-630. | 4.8 | 71 |
| 23 | In-Situ X-ray Scattering Studies of a Unique Toughening Mechanism in Surface-Modified Carbon Nanofiber/UHMWPE Nanocomposite Films. <i>Macromolecules</i> , 2005, 38, 3883-3893. | 4.8 | 70 |
| 24 | Orientation-induced crystallization in isotactic polypropylene melt by shear deformation. <i>Macromolecular Symposia</i> , 2002, 185, 105-117. | 0.7 | 62 |
| 25 | Structure Evolution during Cyclic Deformation of an Elastic Propylene-Based Ethylene/Propylene Copolymer. <i>Macromolecules</i> , 2006, 39, 3588-3597. | 4.8 | 62 |
| 26 | Structural developments in synthetic rubbers during uniaxial deformation by in situ synchrotron X-ray diffraction. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2004, 42, 956-964. | 2.1 | 61 |
| 27 | Superstructure Evolution in Poly(ethylene terephthalate) during Uniaxial Deformation above Glass Transition Temperature. <i>Macromolecules</i> , 2006, 39, 2909-2920. | 4.8 | 61 |
| 28 | Molecular dynamics and microstructure development during cold crystallization in poly(ether-ether-ketone) as revealed by real time dielectric and x-ray methods. <i>Journal of Chemical Physics</i> , 2001, 115, 3804-3813. | 3.0 | 59 |
| 29 | New Insights into Lamellar Structure Development and SAXS/WAXD Sequence Appearance during Uniaxial Stretching of Amorphous Poly(ethylene terephthalate) above Glass Transition Temperature. <i>Macromolecules</i> , 2008, 41, 2859-2867. | 4.8 | 58 |
| 30 | Uniaxial deformation of an elastomer nanocomposite containing modified carbon nanofibers by in situ synchrotron X-ray diffraction. <i>Polymer</i> , 2005, 46, 5103-5117. | 3.8 | 45 |
| 31 | Structure Development in Polymers during Fused Filament Fabrication (FFF): An in Situ Small- and Wide-Angle X-ray Scattering Study Using Synchrotron Radiation. <i>Macromolecules</i> , 2019, 52, 9715-9723. | 4.8 | 45 |
| 32 | Molecular Weight and Crystallization Temperature Effects on Poly(ethylene terephthalate) (PET) Homopolymers, an Isothermal Crystallization Analysis. <i>Polymers</i> , 2014, 6, 583-600. | 4.5 | 41 |
| 33 | In-Situ X-ray Deformation Study of Fluorinated Multiwalled Carbon Nanotube and Fluorinated Ethylene/Propylene Nanocomposite Fibers. <i>Macromolecules</i> , 2006, 39, 5427-5437. | 4.8 | 40 |
| 34 | In-Situ Simultaneous Small- and Wide-Angle X-ray Scattering Study of Poly(ether ester) during Cold Drawing. <i>Macromolecules</i> , 2003, 36, 4827-4832. | 4.8 | 34 |
| 35 | Crystallization of Polystyrene-block-[Syndiotactic Poly(propylene)] Block Copolymers from Confinement to Breakout. <i>Macromolecular Rapid Communications</i> , 2005, 26, 107-111. | 3.9 | 33 |
| 36 | Shear-Induced Orientation and Structure Development in Isotactic Polypropylene Melt Containing Modified Carbon Nanofibers. <i>Journal of Macromolecular Science - Physics</i> , 2006, 45, 247-261. | 1.0 | 31 |

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|----|--|-----|-----------|
| 37 | Small-angle X-ray scattering study of intramuscular fish bone: collagen fibril superstructure determined from equidistant meridional reflections. <i>Journal of Applied Crystallography</i> , 2008, 41, 252-261. | 4.5 | 31 |
| 38 | Thermal stability of shear-induced precursor structures in isotactic polypropylene by rheo-X-ray techniques with couette flow geometry. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2006, 44, 3553-3570. | 2.1 | 30 |
| 39 | Probing Flow-Induced Precursor Structures in Blown Polyethylene Films by Synchrotron X-rays during Constrained Melting. <i>Macromolecules</i> , 2005, 38, 5128-5136. | 4.8 | 29 |
| 40 | Deformation behaviour during cold drawing of nanocomposites based on single wall carbon nanotubes and poly(ether ester) copolymers. <i>Polymer</i> , 2007, 48, 3286-3293. | 3.8 | 28 |
| 41 | Characterization, optimization and surface physics aspects of <i>in situ</i> plasma mirror cleaning. <i>Journal of Synchrotron Radiation</i> , 2014, 21, 300-314. | 2.4 | 26 |
| 42 | Combined techniques of Raman spectroscopy and synchrotron two-dimensional x-ray diffraction for in situ study of anisotropic system: Example of polymer fibers under deformation. <i>Review of Scientific Instruments</i> , 2003, 74, 3087-3092. | 1.3 | 22 |
| 43 | Trilayer Crystalline Lamellar Morphology under Confinement. <i>Macromolecules</i> , 2006, 39, 2739-2742. | 4.8 | 21 |
| 44 | The morphology and polymorphism of self-nucleated trigonal isotactic poly(1-butene) studied by synchrotron IR microspectroscopy. <i>CrystEngComm</i> , 2016, 18, 816-828. | 2.6 | 21 |
| 45 | In situ synchrotron SAXS/WAXD studies during melt spinning of modified carbon nanofiber and isotactic polypropylene nanocomposite. <i>Colloid and Polymer Science</i> , 2004, 282, 802-809. | 2.1 | 19 |
| 46 | Lattice Deformation of Strain-induced Crystallites in Carbon-filled Natural Rubber. <i>Chemistry Letters</i> , 2004, 33, 220-221. | 1.3 | 18 |
| 47 | Confined Discotic Liquid Crystalline Self-Assembly in a Novel Coil-Disk Triblock Oligomer. <i>Macromolecules</i> , 2005, 38, 3386-3394. | 4.8 | 17 |
| 48 | Relationship between structure and dynamic mechanical properties of a carbon nanofiber reinforced elastomeric nanocomposite. <i>Polymer</i> , 2006, 47, 6797-6807. | 3.8 | 17 |
| 49 | Small-angle X-ray study of the three-dimensional collagen/mineral superstructure in intramuscular fish bone. <i>Journal of Applied Crystallography</i> , 2007, 40, s666-s668. | 4.5 | 17 |
| 50 | Phase Transitions and Honeycomb Morphology in an Incompatible Blend of Enantiomeric Polylactide Block Copolymers. <i>Macromolecules</i> , 2006, 39, 8203-8206. | 4.8 | 16 |
| 51 | Reversible De-Intercalation and Intercalation Induced by Polymer Crystallization and Melting in a Poly(ethylene oxide)/Organoclay Nanocomposite. <i>Langmuir</i> , 2005, 21, 5672-5676. | 3.5 | 14 |
| 52 | The role of high molecular weight chains in flow-induced crystallization precursor structures. <i>Journal of Physics Condensed Matter</i> , 2006, 18, S2421-S2436. | 1.8 | 12 |
| 53 | Probing structure development in Poly(vinylidene Fluoride) during ∞ -3-D printing by small and wide angle X-ray scattering. <i>Polymer</i> , 2022, 249, 124827. | 3.8 | 9 |
| 54 | Nanometer accuracy with continuous scans at the ALBA-NOM. , 2016, , . | | 7 |

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|----|---|-----|-----------|
| 55 | Order and Segmental Mobility in Crystallizing Polymers. , 2007, , 435-456. | | 2 |
| 56 | Deflectometry encoding the measured angle in a time-dependent intensity signal. Review of Scientific Instruments, 2019, 90, 021707. | 1.3 | 2 |
| 57 | Epitaxial Phase Transformation between Cylindrical and Double Gyroid Mesophases. Materials Research Society Symposia Proceedings, 2004, 856, BB2.3.1. | 0.1 | 1 |