# Roland Seguela

List of Publications by Year
in descending order

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| 60 | 3,356 | 126907 | 138484 |
|---|---|---|---|
| papers | citations | 33 | 58 |
| | | h-index | g-index |

| 60 | 60 | 60 | 2407 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Critical review of the molecular topology of semicrystalline polymers: The origin and assessment of intercrystalline tie molecules and chain entanglements. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 1729-1748. | 2.1 | 251 |
| 2 | Strain-Induced Molecular Ordering in Polylactide upon Uniaxial Stretching. Macromolecules, 2010, 43, 1488-1498. | 4.8 | 214 |
| 3 | Structural and mechanical behavior of nylon 6 films part I. Identification and stability of the crystalline phases. Journal of Polymer Science, Part B: Polymer Physics, 2001, 39, 484-495. | 2.1 | 140 |
| 4 | Morphology, thermal behavior and mechanical properties of binary blends of compatible biosourced polymers: Polylactide/polyamide11. Polymer, 2011, 52, 1417-1425. | 3.8 | 136 |
| 5 | Effect of water absorption on the plastic deformation behavior of nylon 6. European Polymer Journal, 2009, 45, 757-762. | 5.4 | 124 |
| 6 | Influence of the Î² crystalline phase on the mechanical properties of unfilled and CaCO 3 -filled polypropylene. I. Structural and mechanical characterisation. Polymer, 2001, 42, 7127-7135. | 3.8 | 122 |
| 7 | On the Natural Draw Ratio of Semi-Crystalline Polymers: Review of the Mechanical, Physical and Molecular Aspects. Macromolecular Materials and Engineering, 2007, 292, 235-244. | 3.6 | 121 |
| 8 | Tensile Yield of Polyethylene and Related Copolymers:â€‰ Mechanical and Structural Evidences of Two Thermally Activated Processes. Macromolecules, 1997, 30, 1158-1167. | 4.8 | 108 |
| 9 | Effects of crystal content on the mechanical behaviour of polyethylene under finite strains: Experiments and constitutive modelling. International Journal of Plasticity, 2011, 27, 492-511. | 8.8 | 106 |
| 10 | Physical and mechanical properties of polyethylene for pipes in relation to molecular architecture. I. Microstructure and crystallisation kinetics. Polymer, 2001, 42, 8425-8434. | 3.8 | 99 |
| 11 | Assessment of polyamide-6 crystallinity by DSC. Journal of Thermal Analysis and Calorimetry, 2015, 122, 307-314. | 3.6 | 93 |
| 12 | Crystallization Kinetics and Crystal Structure of Nylon6-Clay Nanocomposites: Combined Effects of Thermomechanical History, Clay Content, and Cooling Conditions. Macromolecules, 2008, 41, 9234-9244. | 4.8 | 86 |
| 13 | Diffusion versus Cocrystallization of Very Long Polymer Chains at Interfaces: Experimental Study of Sintering of UHMWPE Nascent Powder. Macromolecules, 2014, 47, 197-207. | 4.8 | 85 |
| 14 | Structural and mechanical behavior of nylon-6 films. II. Uniaxial and biaxial drawing. Journal of Polymer Science, Part B: Polymer Physics, 2001, 39, 1224-1236. | 2.1 | 84 |
| 15 | Plastic deformation of polypropylene in relation to crystalline structure. Journal of Applied Polymer Science, 1999, 71, 1873-1885. | 2.6 | 78 |
| 16 | Influence of the Î²-crystalline phase on the mechanical properties of unfilled and calcium carbonate-filled polypropylene: Ductile cracking and impact behavior. Journal of Polymer Science, Part B: Polymer Physics, 2002, 40, 31-42. | 2.1 | 75 |
| 17 | Amorphous Phase Modulus and Microâ€“Macro Scale Relationship in Polyethylene via in Situ SAXS and WAXS. Macromolecules, 2015, 48, 2149-2160. | 4.8 | 73 |
| 18 | In situ AFM investigation of crazing in polybutene spherulites under tensile drawing. Polymer, 2007, 48, 6041-6048. | 3.8 | 67 |

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|---|---|---|---|
| 19 | Dislocation approach to the plastic deformation of semicrystalline polymers: Kinetic aspects for polyethylene and polypropylene*. Journal of Polymer Science, Part B: Polymer Physics, 2002, 40, 593-601. | 2.1 | 66 |
| 20 | Tensile yield of polyethylene in relation to crystal thickness. Journal of Polymer Science, Part B: Polymer Physics, 1993, 31, 759-766. | 2.1 | 62 |
| 21 | Mechanisms of Chain Reentanglement during the Sintering of UHMWPE Nascent Powder: Effect of Molecular Weight. Macromolecules, 2015, 48, 5328-5338. | 4.8 | 62 |
| 22 | Short-term mechanical and structural approaches for the evaluation of polyethylene stress crack resistance. Polymer, 2006, 47, 3904-3914. | 3.8 | 61 |
| 23 | Physical and mechanical properties of polyethylene for pipes in relation to molecular architecture. II. Short-term creep of isotropic and drawn materials. Journal of Applied Polymer Science, 2002, 84, 2308-2317. | 2.6 | 58 |
| 24 | In-situ SAXS study and modeling of the cavitation/crystal-shear competition in semi-crystalline polymers: Influence of temperature and microstructure in polyethylene. Polymer, 2013, 54, 5408-5418. | 3.8 | 57 |
| 25 | On the Strainâ€Induced Crystalline Phase Changes in Semiâ€Crystalline Polymers: Mechanisms and Incidence on the Mechanical Properties. Journal of Macromolecular Science - Reviews in Macromolecular Chemistry and Physics, 2005, 45, 263-287. | 2.2 | 53 |
| 26 | Surface free energy of the chain-folding crystal faces of ethylene-butene random copolymers. Polymer, 1993, 34, 2946-2950. | 3.8 | 50 |
| 27 | Plastic deformation of spherulitic semi-crystalline polymers: An in situ AFM study of polybutene under tensile drawing. Polymer, 2009, 50, 3714-3723. | 3.8 | 49 |
| 28 | Temperature-Microstructure Mapping of the Initiation of the Plastic Deformation Processes in Polyethylene via In Situ WAXS and SAXS. Macromolecules, 2015, 48, 5267-5275. | 4.8 | 48 |
| 29 | Shear banding in polyamide 6 films as revealed by atomic force microscopy. Polymer, 2000, 41, 1561-1569. | 3.8 | 47 |
| 30 | In-situ SAXS study of the mesoscale deformation of polyethylene in the pre-yield strain domain: Influence of microstructure and temperature. Polymer, 2014, 55, 1223-1227. | 3.8 | 45 |
| 31 | Molecular topology in ethylene copolymers studied by means of mechanical testing. Journal of Materials Science, 1988, 23, 415-421. | 3.7 | 42 |
| 32 | Influence of the molecular architecture of low-density polyethylene on the texture and mechanical properties of blown films. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 327-340. | 2.1 | 41 |
| 33 | Plastic deformation of polyethylene and ethylene copolymers: Part I Homogeneous crystal slip and molecular mobility. Journal of Materials Science, 1998, 33, 1273-1279. | 3.7 | 35 |
| 34 | Structure and mechanical behavior of nylon-6 fibers filled with organic and mineral nanoparticles. I. Microstructure of spun and drawn fibers. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 3876-3892. | 2.1 | 32 |
| 35 | Non-isothermal crystallization kinetics of polyamide 66/glass fibers/carbon black composites. Journal of Thermal Analysis and Calorimetry, 2016, 124, 1319-1329. | 3.6 | 32 |
| 36 | High temperature behaviour of the crystalline phases in unfilled and clay-filled nylon 6 fibers. Polymer, 2006, 47, 5071-5079. | 3.8 | 30 |

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| 37 | Crystallization of glass-fiber-reinforced polyamide 66 composites: Influence of glass-fiber content and cooling rate. Composites Science and Technology, 2016, 130, 70-77. | 7.8 | 30 |
| 38 | Critical stress and thermal activation of crystal plasticity in polyethylene: Influence of crystal microstructure and chain topology. Polymer, 2017, 118, 192-200. | 3.8 | 30 |
| 39 | Strain-induced disorderâ€“order crystalline phase transition in nylon 6 and its miscible blends. Polymer, 2007, 48, 5080-5087. | 3.8 | 28 |
| 40 | Tensile Deformation of Bulk Polyamide 6 in the Preyield Strain Range. Microâ€“Macro Strain Relationships via in Situ SAXS and WAXS. Macromolecules, 2017, 50, 1541-1553. | 4.8 | 27 |
| 41 | Plastic deformation of polyethylene and ethylene copolymers: Part II Heterogeneous crystal slip and strain-induced phase change. Journal of Materials Science, 1998, 33, 1801-1807. | 3.7 | 25 |
| 42 | Microstructure and mechanical behavior of polyamide 66-precipitated calcium carbonate composites: Influence of the particle surface treatment. Journal of Applied Polymer Science, 2006, 100, 989-999. | 2.6 | 25 |
| 43 | On the strain-induced fibrillar microstructure of polyethylene: Influence of chemical structure, initial morphology and draw temperature. EXPRESS Polymer Letters, 2016, 10, 311-323. | 2.1 | 24 |
| 44 | Micro/macro-stress relationship and local stress distribution in polyethylene spherulites upon uniaxial stretching in the small strain domain. Polymer, 2018, 140, 215-224. | 3.8 | 23 |
| 45 | Non-isothermal crystallization kinetics and nucleation behavior of isotactic polypropylene composites with micro-talc. Journal of Thermal Analysis and Calorimetry, 2019, 138, 1081-1095. | 3.6 | 20 |
| 46 | Overview and critical survey of polyamide6 structural habits: Misconceptions and controversies. Journal of Polymer Science, 2020, 58, 2971-3003. | 3.8 | 20 |
| 47 | On the deformation induced orderâ€“disorder transitions in the crystalline phase of polyamide 6. European Polymer Journal, 2011, 47, 88-97. | 5.4 | 18 |
| 48 | Temperature dependence of the melting enthalpy of poly (ethylene terephthalate) and poly(aryl-ether-ether-ketone). Polymer, 1993, 34, 1761-1764. | 3.8 | 17 |
| 49 | Plastic behavior of monoclinic polypropylene under hydrostatic pressure in compressive testing. Journal of Applied Polymer Science, 1999, 72, 1241-1247. | 2.6 | 17 |
| 50 | On the plastic behavior of homogeneous ethylene copolymers compared with heterogeneous copolymers. Polymer Engineering and Science, 1997, 37, 1672-1683. | 3.1 | 16 |
| 51 | Tensile drawing of ethylene/vinyl-alcohol copolymers: 3. Biaxial orientation. Polymer, 1999, 40, 47-52. | 3.8 | 13 |
| 52 | Trichroic infrared analysis of the strain-induced structural changes in the PA6 layer of PA6/PE multilayer films under biaxial drawing. Polymer, 2009, 50, 5812-5823. | 3.8 | 13 |
| 53 | Binary blends of linear ethylene copolymers over a wide crystallinity range: Rheology, crystallization, melting and structure properties. Polymer, 2010, 51, 2903-2917. | 3.8 | 13 |
| 54 | The role of strain-induced structural changes on the mechanical behavior of PA6/PE multilayer films under uniaxial drawing. Polymer, 2012, 53, 5336-5346. | 3.8 | 13 |

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| 55 | Kinetics of the non-isothermal fusion-welding of unlike ethylene copolymers over a wide crystallinity range. Polymer, 2013, 54, 2755-2763. | 3.8 | 13 |
| 56 | Small-angle X-ray scattering investigation of the deformation processes in the amorphous phase of high density polyethylene. Polymer International, 2004, 53, 582-585. | 3.1 | 12 |
| 57 | Structure and mechanical behavior of nylon 6 fibers filled with organic and mineral nanoparticles. II.In situ study of deformation mechanisms. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 2633-2648. | 2.1 | 9 |
| 58 | Crystallization-induced gelation of ethylene/1-butene copolymers over a wide crystallinity range. Colloid and Polymer Science, 1995, 273, 753-765. | 2.1 | 7 |
| 59 | Hot compaction of polyoxymethylene. II. Structural characterization. Journal of Applied Polymer Science, 2007, 106, 757-764. | 2.6 | 7 |
| 60 | A reâ€examination of the subâ€‹T<sub>m</sub> exotherm in polyamide 6: The roles of thermal history, water and clay. Journal of Polymer Science, Part B: Polymer Physics, 2009, 47, 2385-2393. | 2.1 | 4 |