

# Roland Seguela

## List of Publications by Year in descending order

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60  
papers

3,356  
citations

126907

33  
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138484

58  
g-index

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all docs

60  
docs citations

60  
times ranked

2407  
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview and critical survey of polyamide6 structural habits: Misconceptions and controversies. Journal of Polymer Science, 2020, 58, 2971-3003.	3.8	20
2	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
3	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
4	Tensile Deformation of Bulk Polyamide 6 in the Preyield Strain Range. Micro-“Macro Strain Relationships via in Situ SAXS and WAXS. Macromolecules, 2017, 50, 1541-1553.	4.8	27
5	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
6	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
7	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
8	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
9	Amorphous Phase Modulus and Micro-“Macro Scale Relationship in Polyethylene via <i>in Situ</i> SAXS and WAXS. Macromolecules, 2015, 48, 2149-2160.	4.8	73
10	Mechanisms of Chain Reentanglement during the Sintering of UHMWPE Nascent Powder: Effect of Molecular Weight. Macromolecules, 2015, 48, 5328-5338.	4.8	62
11	Assessment of polyamide-6 crystallinity by DSC. Journal of Thermal Analysis and Calorimetry, 2015, 122, 307-314.	3.6	93
12	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
13	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
14	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
15	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
16	Kinetics of the non-isothermal fusion-welding of unlike ethylene copolymers over a wide crystallinity range. Polymer, 2013, 54, 2755-2763.	3.8	13
17	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
18	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

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19	On the deformation induced order→disorder transitions in the crystalline phase of polyamide 6. <i>European Polymer Journal</i> , 2011, 47, 88-97.	5.4	18
20	Morphology, thermal behavior and mechanical properties of binary blends of compatible biosourced polymers: Polylactide/polyamide11. <i>Polymer</i> , 2011, 52, 1417-1425.	3.8	136
21	Binary blends of linear ethylene copolymers over a wide crystallinity range: Rheology, crystallization, melting and structure properties. <i>Polymer</i> , 2010, 51, 2903-2917.	3.8	13
22	Strain-Induced Molecular Ordering in Polylactide upon Uniaxial Stretching. <i>Macromolecules</i> , 2010, 43, 1488-1498.	4.8	214
23	A re-examination of the sub <i>T<sub>m</sub></i> exotherm in polyamide 6: The roles of thermal history, water and clay. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009, 47, 2385-2393.	2.1	4
24	Effect of water absorption on the plastic deformation behavior of nylon 6. <i>European Polymer Journal</i> , 2009, 45, 757-762.	5.4	124
25	Plastic deformation of spherulitic semi-crystalline polymers: An in situ AFM study of polybutene under tensile drawing. <i>Polymer</i> , 2009, 50, 3714-3723.	3.8	49
26	Trichroic infrared analysis of the strain-induced structural changes in the PA6 layer of PA6/PE multilayer films under biaxial drawing. <i>Polymer</i> , 2009, 50, 5812-5823.	3.8	13
27	Crystallization Kinetics and Crystal Structure of Nylon6-Clay Nanocomposites: Combined Effects of Thermomechanical History, Clay Content, and Cooling Conditions. <i>Macromolecules</i> , 2008, 41, 9234-9244.	4.8	86
28	Hot compaction of polyoxymethylene. II. Structural characterization. <i>Journal of Applied Polymer Science</i> , 2007, 106, 757-764.	2.6	7
29	On the Natural Draw Ratio of Semi-Crystalline Polymers: Review of the Mechanical, Physical and Molecular Aspects. <i>Macromolecular Materials and Engineering</i> , 2007, 292, 235-244.	3.6	121
30	In situ AFM investigation of crazing in polybutene spherulites under tensile drawing. <i>Polymer</i> , 2007, 48, 6041-6048.	3.8	67
31	Strain-induced disorder→order crystalline phase transition in nylon 6 and its miscible blends. <i>Polymer</i> , 2007, 48, 5080-5087.	3.8	28
32	Short-term mechanical and structural approaches for the evaluation of polyethylene stress crack resistance. <i>Polymer</i> , 2006, 47, 3904-3914.	3.8	61
33	High temperature behaviour of the crystalline phases in unfilled and clay-filled nylon 6 fibers. <i>Polymer</i> , 2006, 47, 5071-5079.	3.8	30
34	Microstructure and mechanical behavior of polyamide 66-precipitated calcium carbonate composites: Influence of the particle surface treatment. <i>Journal of Applied Polymer Science</i> , 2006, 100, 989-999.	2.6	25
35	Critical review of the molecular topology of semicrystalline polymers: The origin and assessment of intercrystalline tie molecules and chain entanglements. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2005, 43, 1729-1748.	2.1	251
36	On the Strain-Induced Crystalline Phase Changes in Semi-Crystalline Polymers: Mechanisms and Incidence on the Mechanical Properties. <i>Journal of Macromolecular Science - Reviews in Macromolecular Chemistry and Physics</i> , 2005, 45, 263-287.	2.2	53

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37	Structure and mechanical behavior of nylon 6 fibers filled with organic and mineral nanoparticles. II. In situ study of deformation mechanisms. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2004, 42, 2633-2648.	2.1	9
38	Structure and mechanical behavior of nylon-6 fibers filled with organic and mineral nanoparticles. I. Microstructure of spun and drawn fibers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2004, 42, 3876-3892.	2.1	32
39	Small-angle X-ray scattering investigation of the deformation processes in the amorphous phase of high density polyethylene. <i>Polymer International</i> , 2004, 53, 582-585.	3.1	12
40	Influence of the molecular architecture of low-density polyethylene on the texture and mechanical properties of blown films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2003, 41, 327-340.	2.1	41
41	Physical and mechanical properties of polyethylene for pipes in relation to molecular architecture. II. Short-term creep of isotropic and drawn materials. <i>Journal of Applied Polymer Science</i> , 2002, 84, 2308-2317.	2.6	58
42	Influence of the $\beta$ -crystalline phase on the mechanical properties of unfilled and calcium carbonate-filled polypropylene: Ductile cracking and impact behavior. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2002, 40, 31-42.	2.1	75
43	Dislocation approach to the plastic deformation of semicrystalline polymers: Kinetic aspects for polyethylene and polypropylene*. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2002, 40, 593-601.	2.1	66
44	Physical and mechanical properties of polyethylene for pipes in relation to molecular architecture. I. Microstructure and crystallisation kinetics. <i>Polymer</i> , 2001, 42, 8425-8434.	3.8	99
45	Structural and mechanical behavior of nylon-6 films. II. Uniaxial and biaxial drawing. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2001, 39, 1224-1236.	2.1	84
46	Structural and mechanical behavior of nylon 6 films part I. Identification and stability of the crystalline phases. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2001, 39, 484-495.	2.1	140
47	Influence of the $\beta$ crystalline phase on the mechanical properties of unfilled and CaCO <sub>3</sub> -filled polypropylene. I. Structural and mechanical characterisation. <i>Polymer</i> , 2001, 42, 7127-7135.	3.8	122
48	Shear banding in polyamide 6 films as revealed by atomic force microscopy. <i>Polymer</i> , 2000, 41, 1561-1569.	3.8	47
49	Tensile drawing of ethylene/vinyl-alcohol copolymers: 3. Biaxial orientation. <i>Polymer</i> , 1999, 40, 47-52.	3.8	13
50	Plastic deformation of polypropylene in relation to crystalline structure. <i>Journal of Applied Polymer Science</i> , 1999, 71, 1873-1885.	2.6	78
51	Plastic behavior of monoclinic polypropylene under hydrostatic pressure in compressive testing. <i>Journal of Applied Polymer Science</i> , 1999, 72, 1241-1247.	2.6	17
52	Plastic deformation of polyethylene and ethylene copolymers: Part II Heterogeneous crystal slip and strain-induced phase change. <i>Journal of Materials Science</i> , 1998, 33, 1801-1807.	3.7	25
53	Plastic deformation of polyethylene and ethylene copolymers: Part I Homogeneous crystal slip and molecular mobility. <i>Journal of Materials Science</i> , 1998, 33, 1273-1279.	3.7	35
54	Tensile Yield of Polyethylene and Related Copolymers: Mechanical and Structural Evidences of Two Thermally Activated Processes. <i>Macromolecules</i> , 1997, 30, 1158-1167.	4.8	108

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55	On the plastic behavior of homogeneous ethylene copolymers compared with heterogeneous copolymers. <i>Polymer Engineering and Science</i> , 1997, 37, 1672-1683.	3.1	16
56	Crystallization-induced gelation of ethylene/1-butene copolymers over a wide crystallinity range. <i>Colloid and Polymer Science</i> , 1995, 273, 753-765.	2.1	7
57	Temperature dependence of the melting enthalpy of poly (ethylene terephthalate) and poly(aryl-ether-ether-ketone). <i>Polymer</i> , 1993, 34, 1761-1764.	3.8	17
58	Tensile yield of polyethylene in relation to crystal thickness. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1993, 31, 759-766.	2.1	62
59	Surface free energy of the chain-folding crystal faces of ethylene-butene random copolymers. <i>Polymer</i> , 1993, 34, 2946-2950.	3.8	50
60	Molecular topology in ethylene copolymers studied by means of mechanical testing. <i>Journal of Materials Science</i> , 1988, 23, 415-421.	3.7	42