# CITATION REPORT List of articles citing



DOI: 10.1103/physreve.57.7192 Physical Review E, 1998, 57, 7192-7205.

Source: https://exaly.com/paper-pdf/29460227/citation-report.pdf

Version: 2024-04-28

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
1583	Plastic Dynamics and Brittle Vs. Ductile Failure in Noncrystalline Solids. <b>1998</b> , 539, 131		
1582	Rate-and-state theory of plastic deformation near a circular hole. <i>Physical Review E</i> , <b>1999</b> , 60, 6978-83	2.4	12
1581	Molecular-dynamics study of ductile and brittle fracture in model noncrystalline solids. <b>1999</b> , 60, 7062-7	7070	156
1580	Physical analysis of the state- and rate-dependent friction law. II. Dynamic friction. <b>1999</b> , 60, 3928-3939		201
1579	Numerical and analytic routes from microscales to macroscales in theories of deformation and fracture. <b>1999</b> , 6, 89-94		
1578	Effects of Hydrogen on the Internal Time Scales in Zr-Ti-Ni-Cu-Be Bulk Metallic Glasses. <b>2000</b> , 644, 1031		
1577	Multimode bifurcations in the propagation of fast cracks. <b>2000</b> , 274, 206-212		1
1576	Straight cracks in dynamic brittle fracture. <b>2000</b> , 61, 11472-11486		10
1575	Slip pulses at a sheared frictional viscoelastic/nondeformable interface. <i>Physical Review E</i> , <b>2000</b> , 62, 172	<u>9-</u> 37	14
1574	From Simulation to Theory in the Physics of Deformation and Fracture. <b>2000</b> , 25, 40-45		50
1573	Viscoplasticity and the dynamics of brittle fracture. <i>Physical Review E</i> , <b>2000</b> , 62, 1351-60	2.4	18
1572	Theory of time-dependent plastic deformation in disordered solids. <b>2000</b> , 61, 5949-5966		25
1571	Continuum field description of crack propagation. <b>2000</b> , 85, 118-21		195
1570	Microstructural shear localization in plastic deformation of amorphous solids. <i>Physical Review E</i> , <b>2001</b> , 64, 011504	2.4	77
1569	Molecular dynamics studies of plastic deformation during silicon nanoindentation. <b>2001</b> , 12, 250-257		36
1568	Model for the rheology and nonlinear response of layered materials. <b>2001</b> , 45, 161-185		8
1567	Energy landscape view of fracture and avalanches in disordered materials. <i>Physical Review E</i> , <b>2001</b> , 64, 051508	2.4	39

1566 Plastic Deformation of Noncrystalline Materials. **2001**, 7071-7078

1565	Sliding behavior of metallic glass: Part II. Computer simulations. <b>2001</b> , 250, 420-430	82
1564	Viscoelasticity and viscoplasticity of glassy polymers in the vicinity of the yield point. <b>2001</b> , 28, 247-254	4
1563	Molecular dynamics simulations of laser disintegration of amorphous aerosol particles with spatially nonuniform absorption. <b>2001</b> , 180, 245-250	18
1562	Motor protein-driven unidirectional transport of micrometer-sized cargoes across isopolar microtubule arrays. <b>2001</b> , 12, 238-244	143
1561	Crystalline ground states of an entropically stabilized quasicrystal model. 2001, 64,	12
1560	Microstructure evolution and plasticity in Zr-based glass-forming alloys. <i>Physical Review E</i> , <b>2001</b> , 64, 021 <b>6</b> 02	1
1559	Extremal model for amorphous media plasticity. <b>2002</b> , 89, 195506	120
1558	Rearrangements and dilatancy for sheared dense materials. <b>2002</b> , 89, 195503	110
1557	Origin of a repose angle: kinetics of rearrangement for granular materials. <b>2002</b> , 89, 064303	46
1556	Possible microscopic explanation of the virtually universal occurrence of static friction. 2002, 65,	28
1555	Flow state in molecular-dynamics-simulated deformed amorphous Ni0.5Zr0.5. <b>2002</b> , 66,	17
1554	Strain Localization in a Molecular-Dynamics Model of a Metallic Glass. <b>2002</b> , 754, 1	2
1553	Transition regimes for growing crack populations. <i>Physical Review E</i> , <b>2002</b> , 65, 056105 2.4	41
1552	Dense flows of dry granular material. <b>2002</b> , 3, 163-175	52
1551	The effects of hydrogen on viscoelastic relaxation in Zr <b>I</b> IiNituBe bulk metallic glasses: implications for hydrogen embrittlement. <b>2002</b> , 50, 537-551	51
1550	Examples of structural evolution during sliding and shear of ductile materials. 2003, 49, 977-983	74
1549	Atomistic modeling of mechanical behavior. <b>2003</b> , 51, 5711-5742	99

1548	Atomistic basis for the plastic yield criterion of metallic glass. <b>2003</b> , 2, 449-52	417
1547	Transitions between smooth and complex stick-slip sliding of surfaces. <i>Physical Review E</i> , <b>2003</b> , 68, 0216024	56
1546	Dynamics of large-scale plastic deformation and the necking instability in amorphous solids. <b>2003</b> , 90, 045506	42
1545	Sliding and deformation of metallic glass: experiments and MD simulations. <b>2003</b> , 317, 206-214	41
1544	Plastic flow in two-dimensional solids. <i>Physical Review E</i> , <b>2003</b> , 68, 061502 2.4	33
1543	From Crystalline to Glassy: Crack Propagation Modes in Decagonal Quasicrystals. 2003, 805, 312	
1542	Evolution of the Free Volume during Homogeneous Flow of a Metallic Glass. 2003, 806, 303	
1541	Local stress relaxation and shear banding in a dry foam under shear. <b>2003</b> , 90, 258303	125
1540	Nucleation of solids in solids: ferrites and martensites. <b>2003</b> , 91, 045502	26
1539	Anomalous acoustic reflection on a sliding interface or a shear band. <i>Physical Review E</i> , <b>2003</b> , 67, 061301 <sub>2.4</sub>	7
1538	Fracture behavior of Lennard-Jones glasses. <i>Physical Review E</i> , <b>2003</b> , 68, 021802 2.4	12
1537	Dynamics of shear-transformation zones in amorphous plasticity: energetic constraints in a minimal theory. <i>Physical Review E</i> , <b>2003</b> , 68, 061507	67
1536	Depinning Transition as a Critical Phenomenon. <b>2003</b> , 17, 4113-4122	
1535	Transient processes in <b>B</b> oft[ <b>I</b> tribology: ageing, jamming, healing, [ <b>I2003</b> , 43, 3-12	
1534	Nonlinear strain theory of plastic flow in solids. <b>2003</b> , 15, S891-S901	11
1533	Continuum mesoscale theory inspired by plasticity. <b>2004</b> , 65, 665-670	2
1532	Forced motion of a probe particle near the colloidal glass transition. <b>2004</b> , 67, 477-483	148
1531	Transitory response of confined polymer films subjected to oscillatory shear. <b>2004</b> , 121, 11402-7	1

1530	Simulation of Cu-Mg metallic glass: Thermodynamics and structure. <b>2004</b> , 69,		53
1529	Dynamics of shear-transformation zones in amorphous plasticity: Formulation in terms of an effective disorder temperature. <i>Physical Review E</i> , <b>2004</b> , 70, 041502		132
1528	Statistics of bubble rearrangements in a slowly sheared two-dimensional foam. <i>Physical Review E</i> , <b>2004</b> , 70, 041406	-	57
1527	Boundary lubrication with a glassy interface. <i>Physical Review E</i> , <b>2004</b> , 69, 061611 2.4		33
1526	Thermal effects in the shear-transformation-zone theory of amorphous plasticity: comparisons to metallic glass data. <i>Physical Review E</i> , <b>2004</b> , 70, 011507	-	96
1525	Nucleation-controlled reactions and metastable structures. <b>2004</b> , 49, 263-284		87
1524	On dense granular flows. <b>2004</b> , 14, 341-65		1295
1523	Elastic consequences of a single plastic event: a step towards the microscopic modeling of the flow of yield stress fluids. <b>2004</b> , 15, 371-81		150
1522	Atomistic simulations of Mgtu metallic glasses: mechanical properties. 2004, 387-389, 996-1000		16
1521	Tribological behavior of WC/DLC/WS2 nanocomposite coatings. <b>2004</b> , 188-189, 605-611		44
1520	Relating metallic glass mechanical properties to liquid structure. <b>2004</b> , 375-377, 671-674		19
1519	New regime of homogeneous flow in the deformation map of metallic glasses: elevated temperature nanoindentation experiments and mechanistic modeling. <b>2004</b> , 52, 5879-5891		372
1518	Reorganization of a dense granular assembly: the unjamming response function. <i>Physical Review E</i> , <b>2004</b> , 69, 031306	-	43
1517	Griffith cracks in the mesoscopic microcrack theory. <b>2004</b> , 37, 5315-5328		8
1516	Subextensive Scaling in the Athermal, Quasistatic Limit of Amorphous Matter in Plastic Shear Flow. <b>2004</b> , 93,		193
1515	Deformation of glassy polycarbonate and polystyrene: the influence of chemical structure and local environment. <b>2005</b> , 46, 4397-4404		20
1514	Tribological characteristics of diamond-like carbon (DLC) based nanocomposite coatings. <b>2005</b> , 259, 744-75	51	19
1513	Structural mechanisms of plastic strain in bulk-amorphous metallic alloys. <b>2005</b> , 50, 409-413		

1512	Scale invariance of the structure upon explosive crystallization of amorphous films. <b>2005</b> , 82, 22-25	9
1511	Simulation of plastic deformation in glassy polymers: Atomistic and mesoscale approaches. <b>2005</b> , 43, 994-1004	11
1510	Rate Sensitivity and Size Effects in Plasma-Enhanced Chemical Vapor Deposited Silicon Oxide Films. <b>2005</b> , 904, 1	
1509	Temperature dependence of crack propagation in a two-dimensional model quasicrystal. <b>2005</b> , 85, 3259-3272	:
1508	Structural transformation and localization during simulated nanoindentation of a noncrystalline metal film. <b>2005</b> , 86, 011914	65
1507	Shear softening and structure in a simulated three-dimensional binary glass. <b>2005</b> , 122, 154508	40
1506	Creation and annihilation of free volume during homogeneous flow of a metallic glass. <b>2005</b> , 97, 033506	142
1505	Slow flows of yield stress fluids: Complex spatiotemporal behavior within a simple elastoplastic model. <i>Physical Review E</i> , <b>2005</b> , 71, 010501	142
1504	Liquidlike atomic environments act as plasticity carriers in amorphous silicon. 2005, 72,	100
1503	Dynamic model of super-arrhenius relaxation rates in glassy materials. <b>2005</b> , 94, 175701	18
1502	Dynamics of shear-transformation zones in amorphous plasticity: nonlinear theory at low temperatures. <i>Physical Review E</i> , <b>2005</b> , 72, 021507	25
1501	Strain localization and percolation of stable structure in amorphous solids. <b>2005</b> , 95, 095502	227
1500	Forced chemical mixing in alloys driven by plastic deformation. <b>2005</b> , 95, 045901	123
1499	Autocatalytic avalanches of unit inelastic shearing events are the mechanism of plastic deformation in amorphous silicon. <b>2005</b> , 72,	71
1498	Unified description of aging and rate effects in yield of glassy solids. <b>2005</b> , 95, 225504	96
1497	Atomic-scale simulations of strain localization in a single-component three-dimensional model amorphous solid. <b>2005</b> , 903, 1	
1496	Continuum limit of amorphous elastic bodies. III. Three-dimensional systems. <b>2005</b> , 72,	177
1495	Glass Transition Behavior of Polymer Films of Nanoscopic Dimensions. <b>2005</b> , 38, 2391-2399	62

1494	dependence. <b>2005</b> , 95, 195501		914
1493	Bridging the Gap Between Atomistics and Structural Engineering. <b>2005</b> , 2749-2756		
1492	Numerical tests of constitutive laws for dense granular flows. <i>Physical Review E</i> , <b>2005</b> , 72, 051303	4	75
1491	Plastic deformation of metallic glasses: Size of shear transformation zones from molecular dynamics simulations. <b>2006</b> , 73,		121
1490	Thickness of shear bands in metallic glasses. <b>2006</b> , 89, 071907		232
1489	Activation energy of shear transformation zones: a key for understanding rheology of glasses and liquids. <b>2006</b> , 97, 195501		164
1488	Patterns and collective behavior in granular media: Theoretical concepts. <b>2006</b> , 78, 641-692		614
1487	Amorphous systems in athermal, quasistatic shear. <i>Physical Review E</i> , <b>2006</b> , 74, 016118 2	4	414
1486	Localized heating and fracture criterion for bulk metallic glasses. <b>2006</b> , 21, 915-922		95
1485	The Spot Model for random-packing dynamics. <b>2006</b> , 38, 717-731		37
1484	Solid friction from stickslip down to pinning and aging. <b>2006</b> , 55, 279-348		284
1483	Soft Glassy Rheology. <b>2006</b> , 161-192		8
1482	Atomistic simulation and analysis of plasticity in amorphous silicon§View all notes. 2006, 86, 4153-4172		36
1481	Atomic-scale simulations of strain localization in three-dimensional model amorphous solids. <b>2006</b> , 73,		137
1480	Free volume cannot explain the spatial heterogeneity of Debyel-Waller factors in a glass-forming binary alloy. <b>2006</b> , 352, 5098-5102		57
1479	Stability of amorphous structures with voids. <b>2006</b> , 352, 4857-4861		4
1478	Molecular dynamics simulation of shear in a pressure-induced amorphous model system. <b>2006</b> , 352, 3074-	307	9
1477	Out-of-equilibrium Relaxation of a Time-dependent Effective Temperature. <b>2006</b> , 129-136		1

The Self-Organisation of Tetrahedrally Close-Packed Structures in Magnetic Nanocrystalline Tb-Fe and Co-Pd Films. **2006**, 115, 267-274

1475	Ductile Metallic Glasses in Supercooled Martensitic Alloys. <b>2006</b> , 47, 2606-2609	54
1474	Atomistic simulations of nanoindentation. <b>2006</b> , 9, 42-50	80
1473	Visualizing dislocation nucleation by indenting colloidal crystals. <b>2006</b> , 440, 319-23	180
1472	High-energy X-ray measurements of structural anisotropy and excess free volume in a homogenously deformed Zr-based metallic glass. <b>2006</b> , 54, 2463-2471	30
1471	Deformation bands in metallic glasses induced by swift heavy ions. <b>2006</b> , 245, 130-132	3
1470	Intrinsic vulnerabilities to mechanical failure in nanoscale films. <b>2006</b> , 38, 924-932	1
1469	Inhomogeneous elastic response of silica glass. <b>2006</b> , 97, 055501	166
1468	A new handshaking of Tight-Binding and Molecular Dynamics in multi-scale simulation. <b>2006</b> , 52, 155-162	
1467	Plastic response of a 2D Lennard-Jones amorphous solid: detailed analysis of the local rearrangements at very slow strain rate. <b>2006</b> , 20, 355-64	204
1466	Size-dependent creep behaviour of plasma-enhanced chemical vapour deposited silicon oxide films. <b>2006</b> , 39, 5054-5063	7
1465	Measurement of Stress-strain Curves of PECVD Silicon Oxide Thin Films by Means of Nanoindentation. <b>2006</b> , 977, 1	
1464	Unified equation for the strength of bulk metallic glasses. <b>2006</b> , 88, 221911	171
1463	Atomistic simulation study of the shear-band deformation mechanism in Mg-Cu metallic glasses. <b>2006</b> , 73,	69
1462	Validity of temperature and time equivalence in metallic glasses during shear deformation. <b>2006</b> , 74,	21
1461	Dynamics and thermodynamics of the glass transition. <i>Physical Review E</i> , <b>2006</b> , 73, 041504 2.4	28
1460	The physics of paper. <b>2006</b> , 69, 669-723	250
1459	Dissipative viscoplastic deformation in dynamic fracture: tip blunting and velocity selection. <b>2006</b> , 97, 134301	12

1458	Mechanical Properties of Bulk Metallic Glasses. <b>2007</b> , 32, 635-638		298
1457	Origin of the plasticity in bulk amorphous alloys. <b>2007</b> , 22, 3087-3097		83
1456	Modeling Deformation and Flow of Disordered Materials. <b>2007</b> , 32, 941-944		20
1455	Characteristic temperatures of glassy behaviour in a simple liquid. <b>2007</b> , 19, 246107		4
1454	Direct identification of the glass transition: Growing length scale and the onset of plasticity. <b>2007</b> , 77, 56002		47
1453	A molecular dynamics study of nanoindentation of amorphous silicon carbide. <b>2007</b> , 102, 023509		30
1452	Friction Control at The Molecular Level: From Superlubricity to Stick-Slip. 2007, 397-426		7
1451	The chemical-mechanical relationship of the SiOC(H) dielectric film. 2007,		3
1450	Avalanche size scaling in sheared three-dimensional amorphous solid. <b>2007</b> , 98, 095501		88
1449	Strain localization driven by structural relaxation in sheared amorphous solids. <i>Physical Review E</i> , <b>2007</b> , 76, 046119	2.4	52
1448	Plastic response of a two-dimensional amorphous solid to quasistatic shear: transverse particle diffusion and phenomenology of dissipative events. <i>Physical Review E</i> , <b>2007</b> , 76, 036104	2.4	58
1447	Crossover from superdiffusive to diffusive mixing in plastically deformed solids. <b>2007</b> , 99, 110602		24
1446	Steady-state, effective-temperature dynamics in a glassy material. <i>Physical Review E</i> , <b>2007</b> , 76, 056107	2.4	58
1445	Elastic convection in vibrated viscoplastic fluids. <b>2007</b> , 98, 044501		11
1444	Strain localization in a shear transformation zone model for amorphous solids. <i>Physical Review E</i> , <b>2007</b> , 76, 056106	2.4	151
1443	Atomistic simulations of correlations between volumetric change and shear softening in amorphous metals. <b>2007</b> , 75,		29
1442	Athermal shear-transformation-zone theory of amorphous plastic deformation. I. Basic principles. <i>Physical Review E</i> , <b>2007</b> , 75, 036107	2.4	88
1441	Activated dynamics and effective temperature in a steady state sheared glass. <b>2007</b> , 99, 195701		99

1440	Free-boundary dynamics in elastoplastic amorphous solids: the circular hole problem. <i>Physical Review E</i> , <b>2007</b> , 76, 026115	2.4	8
1439	Statistics of microscopic yielding in sheared aqueous foams. <b>2007</b> , 87, 125-133		5
1438	Change in Activation Volume for Plastic Deformation of Zr-based Bulk Metallic Glass following Annealing. <b>2007</b> , 1048, 8		
1437	Stress-enhanced mobility and dynamic yielding in polymer glasses. <b>2007</b> , 79, 26006		75
1436	Materials science. The flow of glass. <b>2007</b> , 318, 1880-1		25
1435	Theory of Large-Scale Plastic Deformation in Amorphous Materials: A Progress Report. <b>2007</b> , 1048, 6		
1434	Impact of Microstructural Inhomogenities on the Ductility of Bulk Metallic Glasses. 2007, 48, 1806-1811		8
1433	Theory of Shear Banding in Metallic Glasses and Molecular Dynamics Calculations. <b>2007</b> , 48, 2923-2927		681
1432	Rheology of a dense granular material. <b>2007</b> , 89, 012015		1
1431	The non-Hookian behavior of chalcogenide glasses under irradiation: A nanoindentation study. <b>2007</b> , 353, 1904-1909		19
1430	Load relaxation behavior of a Zr41.2Ti13.8Cu12.5Ni10 Be22.5 bulk metallic glass. 2007, 353, 2515-2520		12
1429	Study of serrated flow and plastic deformation in metallic glasses through instrumented indentation. <b>2007</b> , 15, 706-710		39
1428	Plasticity in bulk metallic glasses investigated via the strain distribution. 2007, 76,		44
1427	Evaluation of the disorder temperature and free-volume formalisms via simulations of shear banding in amorphous solids. <b>2007</b> , 98, 185505		139
1426	Three-dimensional imaging of colloidal glasses under steady shear. <b>2007</b> , 99, 028301		196
1425	Mechanical properties of bulk metallic glasses and composites. <b>2007</b> , 22, 285-301		341
1424	Quasi-static rheology of foams. Part 1. Oscillating strain. <b>2007</b> , 587, 23-44		23
1423	Strain rate dependence of plastic flow in Ce-based bulk metallic glass during nanoindentation. <b>2007</b> , 22, 258-263		31

1422	Directional crystallization and self-assembling initiated by mechanical shock or electron beam in nanocrystalline Co <b>L</b> and Fe <b>L</b> films. <b>2007</b> , 601, 2873-2875	1
1421	Simulations of nanoindentation in a thin amorphous metal film. <b>2007</b> , 515, 3179-3182	18
1420	A constitutive theory for metallic glasses at high homologous temperatures. <b>2007</b> , 55, 3735-3747	40
1419	Stress-induced structural transformation and shear banding during simulated nanoindentation of a metallic glass. <b>2007</b> , 55, 4317-4324	124
1418	Photoplasticity of As2Se3 films investigated with combined nanoindentation and AFM methods. <b>2007</b> , 68, 1062-1068	15
1417	The recovery of structural relaxation-induced viscoelastic creep strain in bulk and ribbon Pd40Cu30Ni10P20 glass. <b>2007</b> , 56, 29-32	24
1416	Nanoindentation creep of plasma-enhanced chemical vapor deposited silicon oxide thin films. <b>2007</b> , 56, 249-252	32
1415	Thermally induced low-temperature relaxation of plastic deformation in glassy organic polymers and silicate glasses. <b>2007</b> , 49, 549-557	5
1414	Deformation of polymer and silicate glasses: Kinetics of thermally stimulated recovery of the initial state of glass samples. <b>2007</b> , 33, 535-544	
1413	Nanoscale alloys and core-shell materials: Model predictions of the nanostructure and mechanical properties. <b>2007</b> , 75,	14
1412	Structural rearrangements that govern flow in colloidal glasses. <b>2007</b> , 318, 1895-9	437
1411	Particle displacements in the elastic deformation of amorphous materials: Local fluctuations vs. non-affine field. <b>2007</b> , 80, 16003	59
1410	An elastic, plastic, viscous model for slow shear of a liquid foam. <b>2007</b> , 23, 337-47	44
1409	Nanoindentation stressEtrain curves of plasma-enhanced chemical vapor deposited silicon oxide thin films. <b>2008</b> , 516, 1941-1951	29
1408	Comparison of shear banding in BMGs due to thermal-softening and free volume creation. <b>2008</b> , 51, 1367-1379	5
1407	A thermomicromechanical approach to multiscale continuum modeling of dense granular materials. <b>2008</b> , 3, 225-240	31
1406	What Can Plasticity of Amorphous Silicon Tell Us about Plasticity of Metallic Glasses?. 2008, 39, 1762-1778	55
1405	Atomistic Origin of Rate-Dependent Serrated Plastic Flow in Metallic Glasses. <b>2008</b> , 3, 524-9	21

1404	A computational analysis of the deformation mechanisms of a nanocrystalmetallic glass composite. <b>2008</b> , 56, 995-1000		46
1403	A constitutive theory for the mechanical response of amorphous metals at high temperatures spanning the glass transition temperature: Application to microscale thermoplastic forming. <b>2008</b> , 56, 3290-3305		46
1402	Mechanical modelling of indentation-induced densification in amorphous silica. <b>2008</b> , 56, 3222-3228		92
1401	Influence of Pb segregation on the deformation of nanocrystalline Al: Insights from molecular simulations. <b>2008</b> , 56, 4750-4761		26
1400	Local order influences initiation of plastic flow in metallic glass: Effects of alloy composition and sample cooling history. <b>2008</b> , 56, 5263-5275		324
1399	Anelastic strain and structural anisotropy in homogeneously deformed Cu64.5Zr35.5 metallic glass. <b>2008</b> , 56, 5575-5583		14
1398	Elastostatically induced structural disordering in amorphous alloys. <b>2008</b> , 56, 5440-5450		156
1397	Instability of crack propagation in brittle bulk metallic glass. 2008, 56, 5845-5860		54
1396	Mechanical properties of sputtered silicon oxynitride films by nanoindentation. 2008, 489, 294-301		45
1395	An elasto-visco-plastic model for immortal foams or emulsions. <b>2008</b> , 25, 225-51		34
1394	Simulations of two-dimensional foam rheology: localization in linear Couette flow and the interaction of settling discs. <b>2008</b> , 26, 81-9		29
1393	On the study of local-stress rearrangements during quasi-static plastic shear of a model glass: do local-stress components contain enough information?. <b>2008</b> , 26, 283-93		48
1392	Effect of the atomic packing density on the structural change rate of amorphous alloys under elastostatic stress. <b>2008</b> , 14, 159-163		15
1391	Molecular plasticity of polymeric glasses in the elastic regime. <i>Physical Review E</i> , <b>2008</b> , 77, 041502	2.4	67
1390	Investigation of the photoplastic effect in vitreous semiconductors by cyclic nanoindentation. <b>2008</b> , 50, 2062-2068		1
1389	Microstructural evolution of an elastostatically compressed amorphous alloy and its influence on the mechanical properties. <b>2008</b> , 58, 591-594		64
1388	A methodology to assess the energy absorption during homogeneous deformation of amorphous alloys. <b>2008</b> , 59, 1174-1177		2
1387	Mesoscale Measures of Nonaffine Deformation in Dense Granular Assemblies. <b>2008</b> , 134, 1095-1113		81

#### (2008-2008)

1386	Mechanical Behavior of Metallic Glasses: Microscopic Understanding of Strength and Ductility. <b>2008</b> , 38, 445-469	468
1385	A constitutive model for fault gouge deformation in dynamic rupture simulations. 2008, 113,	28
1384	Yielding behavior of repulsion- and attraction-dominated colloidal glasses. <b>2008</b> , 52, 649-676	223
1383	Experimental characterization of shear transformation zones for plastic flow of bulk metallic glasses. <b>2008</b> , 105, 14769-72	419
1382	Identification and characterization of potential shear transformation zones in metallic glasses. <b>2008</b> , 100, 255901	60
1381	Shear strain localization in elastodynamic rupture simulations. <b>2008</b> , 35, n/a-n/a	17
1380	Fluctuations, correlations and transitions in granular materials: statistical mechanics for a non-conventional system. <b>2008</b> , 366, 493-504	33
1379	Discontinuous jamming transitions in soft materials: coexistence of flowing and jammed states. <b>2008</b> , 20, 283103	31
1378	Non-affine deformation in microstructure selection in solids: I. Molecular dynamics. <b>2008</b> , 20, 365210	10
1377	Study of mechanical properties of amorphous copper with molecular dynamics simulation. <b>2008</b> , 17, 259-263	7
1376	Cracklike Processes within Frictional Motion: Is Slow Frictional Sliding Really a Slow Process?. <b>2008</b> , 33, 1181-1189	6
1375	Antiplasticization and local elastic constants in trehalose and glycerol mixtures. 2008, 128, 224504	24
1374	Molecular dynamics simulations of homogeneous solids using multi-layered structures. 2008, 83, 10003	
1373	Non-affine deformations and shape recovery in solids undergoing martensitic transformations in two dimensions. <b>2008</b> , 2008, P06003	2
1372	Field-induced ordering phenomena and non-local elastic compliance in two-dimensional colloidal crystals. <b>2008</b> , 20, 404218	13
1371	Density hardening plasticity and mechanical ageing of silica glass under pressure: a Raman spectroscopic study. <b>2008</b> , 20, 485221	41
1370	A Modified Free Volume Model for Characterizing of Rate Effect in Bulk Metallic Glasses. <b>2008</b> , 25, 1052-1055	3
1369	Energy dissipation in fracture of bulk metallic glasses via inherent competition between local softening and quasi-cleavage. <b>2008</b> , 88, 407-426	165

1368	Stability of an expanding circular cavity and the failure of amorphous solids. <i>Physical Review E</i> , <b>2008</b> , 78, 026124	2.4	7
1367	Nonlocal elastic compliance for soft solids: theory, simulations, and experiments. <i>Physical Review E</i> , <b>2008</b> , 78, 026106	2.4	11
1366	Dynamic failure in amorphous solids via a cavitation instability. <i>Physical Review E</i> , <b>2008</b> , 77, 025101	2.4	17
1365	Effective temperature dynamics in an athermal amorphous plasticity theory. <i>Physical Review E</i> , <b>2008</b> , 77, 051505	2.4	13
1364	Evolution of displacements and strains in sheared amorphous solids. <b>2008</b> , 20, 244128		35
1363	Stability map for nanocrystalline and amorphous materials. <b>2008</b> , 101, 025501		25
1362	Structural disordering process of an amorphous alloy driven by the elastostatic compression at room temperature. <b>2008</b> , 92, 151906		47
1361	Deformation behavior of an amorphous Cu64.5Zr35.5 alloy: A combined computer simulation and experimental study. <b>2008</b> , 104, 123532		23
1360	Invariant critical stress for shear banding in a bulk metallic glass. <b>2008</b> , 93, 231912		22
1359	Plastic flow and failure resistance of metallic glass: Insight from in situ compression of nanopillars. <b>2008</b> , 77,		130
1359 1358		2.4	130
	2008, 77,  Path-independent integrals to identify localized plastic events in two dimensions. <i>Physical Review E</i> ,	•	<u> </u>
1358	2008, 77,  Path-independent integrals to identify localized plastic events in two dimensions. <i>Physical Review E</i> , 2008, 78, 016109  Aging in the shear-transformation-zone theory of plastic deformation. <i>Physical Review E</i> , 2008, 78, 0561	•	<u> </u>
1358 1357	2008, 77,  Path-independent integrals to identify localized plastic events in two dimensions. <i>Physical Review E</i> , 2008, 78, 016109  Aging in the shear-transformation-zone theory of plastic deformation. <i>Physical Review E</i> , 2008, 78, 0561	<b>0</b> 94	11 4
1358 1357 1356	Path-independent integrals to identify localized plastic events in two dimensions. <i>Physical Review E</i> , <b>2008</b> , 78, 016109  Aging in the shear-transformation-zone theory of plastic deformation. <i>Physical Review E</i> , <b>2008</b> , 78, 0561  Front propagation at the onset of plastic yielding. <i>Physical Review E</i> , <b>2008</b> , 78, 026119	2.4	11 4 5
1358 1357 1356 1355	Path-independent integrals to identify localized plastic events in two dimensions. <i>Physical Review E</i> , <b>2008</b> , 78, 016109  Aging in the shear-transformation-zone theory of plastic deformation. <i>Physical Review E</i> , <b>2008</b> , 78, 0561  Front propagation at the onset of plastic yielding. <i>Physical Review E</i> , <b>2008</b> , 78, 026119  Reversible plastic events in amorphous materials. <i>Physical Review E</i> , <b>2008</b> , 77, 041505	2.4	11 4 5 65
1358 1357 1356 1355	Path-independent integrals to identify localized plastic events in two dimensions. <i>Physical Review E</i> , <b>2008</b> , 78, 016109  Aging in the shear-transformation-zone theory of plastic deformation. <i>Physical Review E</i> , <b>2008</b> , 78, 0561  Front propagation at the onset of plastic yielding. <i>Physical Review E</i> , <b>2008</b> , 78, 026119  Reversible plastic events in amorphous materials. <i>Physical Review E</i> , <b>2008</b> , 77, 041505  Experimental measures of affine and nonaffine deformation in granular shear. <b>2008</b> , 100, 208302  Shear-transformation-zone theory of plastic deformation near the glass transition. <i>Physical Review</i>	2.4	11 4 5 65 49

### (2009-2009)

1350	Scaling theory for steady-state plastic flows in amorphous solids. <i>Physical Review E</i> , <b>2009</b> , 80, 026128	2.4	23
1349	Relaxation kinetics and mechanical stability of metallic glasses and supercooled melts. 2009, 79,		44
1348	Local elasticity map and plasticity in a model Lennard-Jones glass. <i>Physical Review E</i> , <b>2009</b> , 80, 026112	2.4	221
1347	Spontaneous dissipation of elastic energy by self-localizing thermal runaway. <i>Physical Review E</i> , <b>2009</b> , 80, 046105	2.4	10
1346	Plasticity-induced structural anisotropy of silica glass. <b>2009</b> , 102, 195501		53
1345	Anisotropic power law strain correlations in sheared amorphous 2D solids. <b>2009</b> , 102, 225502		49
1344	Building blocks of dynamical heterogeneities in dense granular media. <b>2009</b> , 102, 088001		105
1343	Strength of submicrometer diameter pillars of metallic glasses investigated with in situ transmission electron microscopy. <b>2009</b> , 89, 633-640		21
1342	Rate-dependent shear bands in a shear-transformation-zone model of amorphous solids. <i>Physical Review E</i> , <b>2009</b> , 79, 016110	2.4	64
1341	Central role of thermal collective strain in the relaxation of structure in a supercooled liquid. <i>Physical Review E</i> , <b>2009</b> , 80, 061501	2.4	13
1340	Molecular dynamics study of size effects in the compression of metallic glass nanowires. 2009, 79,		28
1339	Locality and nonlocality in elastoplastic responses of amorphous solids. <i>Physical Review E</i> , <b>2009</b> , 79, 066	51:0.9	91
1338	Coarse-grained description of localized inelastic deformation in amorphous metals. <b>2009</b> , 94, 191905		18
1337	Assessment of the fatigue transformation zone in bulk metallic glasses using positron annihilation spectroscopy. <b>2009</b> , 105, 093501		13
1336	Optimization and plasticity in disordered media. <b>2009</b> , 103, 225502		12
1335	Rate-dependent avalanche size in athermally sheared amorphous solids. <b>2009</b> , 103, 065501		199
1334	Correlation between structural relaxation and shear transformation zone volume of a bulk metallic glass. <b>2009</b> , 95, 141909		66
1333	Knoll et al. Reply:. <b>2009</b> , 103,		1

1332	Fracture phase separation. <b>2009</b> , 102, 065701	24
1331	Laser diffraction microscopy. <b>2009</b> , 72, 076601	13
1330	Reverse Monte Carlo structural model for a zirconium-based metallic glass incorporating fluctuation microscopy medium-range order data. <b>2009</b> , 24, 3121-3129	21
1329	Materials science. Unjamming a polymer glass. <b>2009</b> , 323, 214-5	17
1328	Structural analysis of rapidly solidified Mgtut glasses during room-temperature embrittlement. <b>2009</b> , 89, 233-248	24
1327	A quantitative link between microplastic instability and macroscopic deformation behaviors in metallic glasses. <b>2009</b> , 106, 083512	11
1326	Crack evolution in bulk metallic glasses. <b>2009</b> , 106, 103518	20
1325	Investigation of thermally activated deformation in amorphous PMMA and Zr-Cu-Al bulk metallic glasses with broadband nanoindentation creep. <b>2009</b> , 24, 1279-1290	15
1324	Indentation creep of a Ti-based metallic glass. <b>2009</b> , 24, 993-997	28
1323	Phenomenology and physical origin of shear localization and shear banding in complex fluids. <b>2009</b> , 48, 831-844	202
1322	Processing of Ultrafine-Size Particulate Metal Matrix Composites by Advanced Shear Technology. <b>2009</b> , 40, 691-701	14
1321	High temperature mechanical properties of rapidly quenched Zr50Ni27Nb18Co5 amorphous alloy. <b>2009</b> , 15, 701-711	6
1320	Seismicity in a model governed by competing frictional weakening and healing mechanisms. <b>2009</b> , 178, 1363-1383	7
1319	Inhomogeneous flow and fracture of glassy materials. <b>2009</b> , 8, 601-9	71
1318	Local electron structure and magnetization in 🛭 Fe86Mn13C. <b>2009</b> , 46, 114-120	4
1317	Effects of quenching rate on amorphous structures of Cu46Zr54 metallic glass. <b>2009</b> , 209, 4601-4606	26
1316	Assessing continuum postulates in simulations of granular flow. <b>2009</b> , 57, 828-839	55
1315	On the origin of shear banding instability in metallic glasses. <b>2009</b> , 57, 1267-1292	160

## (2009-2009)

1314	Macroscopic vs. local rheology of yield stress fluids. <b>2009</b> , 158, 85-90	154
1313	Bulk metallic glasses with large plasticity: Composition design from the structural perspective. <b>2009</b> , 57, 1154-1164	106
1312	Dynamics of shear localization and stress relaxation in amorphous Cu50Ti50. <b>2009</b> , 57, 1437-1441	26
1311	Mesoscale modeling of amorphous metals by shear transformation zone dynamics. <b>2009</b> , 57, 2823-2833	116
1310	Prevalence of shear banding in compression of Zr41Ti14Cu12.5Ni10Be22.5 pillars as small as 150nm in diameter. <b>2009</b> , 57, 3562-3571	62
1309	Structural processes that initiate shear localization in metallic glass. <b>2009</b> , 57, 5146-5155	304
1308	Wide shear zones and the spot model: implications from the split-bottom geometry. <b>2009</b> , 28, 73-8	6
1307	Physics of amorphous solids: Their creation and their mechanical properties. <b>2009</b> , 178, 81-122	10
1306	Creep motion of an intruder within a granular glass close to jamming. <b>2009</b> , 103, 128001	79
1305	Distribution of thermally activated plastic events in a flowing glass. <b>2009</b> , 102, 235503	155
1304	Determination of elastic constants of two-dimensional close-packed colloidal crystals. <b>2009</b> , 25, 5432-6	12
1303	Direct measurement of molecular mobility in actively deformed polymer glasses. <b>2009</b> , 323, 231-4	234
1302	Dynamics of a Glassy Polymer Nanocomposite during Active Deformation. <b>2009</b> , 42, 3632-3640	57
1301	Processing of advanced Al/SiC particulate metal matrix composites under intensive shearing IA novel Rheo-process. <b>2009</b> , 40, 144-151	127
1300	Smaller Deborah number inducing more serrated plastic flow of metallic glass. <b>2009</b> , 46, 767-771	6
1299	Thermomechanical characterization of Cu47.5Zr47.5Al5 bulk metallic glass within the homogeneous flow regime. <b>2009</b> , 17, 65-71	19
1298	Variation of microstructure of Zr60Al15Ni25 bulk amorphous alloy during rolling at room temperature. <b>2009</b> , 479, L15-L17	11
1297	Shear banding, aging and noise dynamics in soft glassy materials. <b>2009</b> , 5, 2378-2382	109

1296	Influence of representative volume element size on predicted elastic properties of polymer materials. <b>2009</b> , 17, 045004		17
1295	Stick-slip instabilities and shear strain localization in amorphous materials. <i>Physical Review E</i> , <b>2009</b> , 80, 066113	2.4	33
1294	Fracture in glassy polymers: a molecular modeling perspective. <b>2009</b> , 21, 463101		51
1293	On the stupendous beauty of closure. <b>2009</b> , 53, 1285-1304		20
1292	Yield stress in metallic glasses: The jamming-unjamming transition studied through Monte Carlo simulations based on the activation-relaxation technique. <b>2009</b> , 80,		60
1291	Coarse Graining in Elasto-viscoplasticity: Bridging the Gap from Microscopic Fluctuations to Dissipation. <b>2009</b> , 253-317		12
1290	Nonequilibrium thermodynamics of driven amorphous materials. III. Shear-transformation-zone plasticity. <i>Physical Review E</i> , <b>2009</b> , 80, 031133	2.4	70
1289	Nonequilibrium thermodynamics of driven amorphous materials. I. Internal degrees of freedom and volume deformation. <i>Physical Review E</i> , <b>2009</b> , 80, 031131	2.4	62
1288	The build-up and relaxation of stresses in a glass-forming soft-sphere mixture under shear: A computer simulation study. <b>2009</b> , 88, 60001		44
1287	Simulating the mechanical response of amorphous solids using atomistic methods. <b>2010</b> , 75, 405-413		42
1286	Plasticity and dynamical heterogeneity in driven glassy materials. <b>2010</b> , 32, 165-81		36
1285	The Jamming Transition and the Marginally Jammed Solid. <b>2010</b> , 1, 347-369		525
1284	Chapter 96 Dislocations in Colloidal Crystals. <b>2010</b> , 16, 233-261		1
1283	Nonlinear elasto-plastic model for dense granular flow. <b>2010</b> , 26, 167-188		80
1282	Cryogenic temperature plasticity of a bulk amorphous alloy. <b>2010</b> , 58, 5295-5304		43
1281	Compression testing of metallic glass at small length scales: Effects on deformation mode and stability. <b>2010</b> , 58, 5789-5796		85
1280	Icosahedral medium-range orders and backbone formation in an amorphous alloy. <b>2010</b> , 16, 877-881		27
1279	Poisson Tratio of metallic glasses under pressure and low temperature. <b>2010</b> , 62, 254-257		10

1278	Energetic criterion on the intrinsic ductility of bulk metallic glasses. <b>2010</b> , 62, 586-589	15
1277	Viscoplasticity of metals: Comments on statistical approaches to dislocation reactions. <b>2010</b> , 165, 1014-1019	
1276	Simulation of crack propagation in fiber-reinforced bulk metallic glasses. <b>2010</b> , 47, 320-329	18
1275	Mobility and stability of glasses. <b>2010</b> , 48, 2558-2560	8
1274	Fluctuations and scaling in creep deformation. <b>2010</b> , 105, 100601	37
1273	Continuum modeling of bulk metallic glasses and composites. <b>2010</b> , 105, 125503	23
1272	Plasticity-induced anisotropy in amorphous solids: the Bauschinger effect. <i>Physical Review E</i> , <b>2010</b> , 82, 026104	16
1271	Relating activation of shear transformation zones to Irelaxations in metallic glasses. 2010, 81,	238
1270	Effective temperature in elastoplasticity of amorphous solids. <b>2010</b> , 81,	10
1269	Microscopic structural relaxation in a sheared supercooled colloidal liquid. <i>Physical Review E</i> , <b>2010</b> , 81, 011403	36
1268	Unified approach to atomic transport phenomena in metallic glasses from the bond deficiency perspective. <b>2010</b> , 81,	7
1267	Size of plastic events in strained amorphous solids at finite temperatures. <b>2010</b> , 104, 025501	43
1266	Deformation-induced accelerated dynamics in polymer glasses. <b>2010</b> , 133, 164513	38
1265	Shear band dynamics from a mesoscopic modeling of plasticity. <b>2010</b> , 2010, P12025	14
1264	From macroscopic yield criteria to atomic stresses in polymer glasses. <i>Physical Review E</i> , <b>2010</b> , 81, 01180 <b>⋬</b> .4	22
1263	Computer simulations of nanoindentation in MgIIu and CuIIr metallic glasses. <b>2010</b> , 18, 055006	12
1262	Plasticity of ductile metallic glasses: a self-organized critical state. <b>2010</b> , 105, 035501	211
1261	Kinetic Monte Carlo study of activated states and correlated shear-transformation-zone activity during the deformation of an amorphous metal. <b>2010</b> , 81,	57

1260	Pulse-like, crack-like, and supershear earthquake ruptures with shear strain localization. <b>2010</b> , 115,		19
1259	Energetics of strain localization in a model of seismic slip. <b>2010</b> , 115,		4
1258	Nonaffine heterogeneities and droplet fluctuations in an equilibrium crystalline solid. <i>Physical Review E</i> , <b>2010</b> , 82, 041115	2.4	7
1257	Role of local order in the small-scale plasticity of model amorphous materials. <i>Physical Review E</i> , <b>2010</b> , 82, 066116	2.4	42
1256	Investigating acoustic-induced deformations in a foam using multiple light scattering. <i>Physical Review E</i> , <b>2010</b> , 82, 021409	2.4	9
1255	Statistical physics of elastoplastic steady states in amorphous solids: finite temperatures and strain rates. <i>Physical Review E</i> , <b>2010</b> , 82, 031301	2.4	58
1254	Coarse-graining microscopic strains in a harmonic, two-dimensional solid: elasticity, nonlocal susceptibilities, and nonaffine noise. <i>Physical Review E</i> , <b>2010</b> , 82, 016112	2.4	11
1253	Fluctuations and correlations during the shear flow of elastic particles near the jamming transition. <b>2010</b> , 6, 3050		39
1252	Multi-scale modeling of shear banding in iron-based metallic glasses. <b>2010</b> , 504, S56-S59		2
1251	Microstructure evolution of Zr60Al15Ni25 bulk metallic glass subjected to rolling at room temperature. <b>2010</b> , 504, S251-S255		3
1250	Friction, Fracture, and Earthquakes. <b>2010</b> , 1, 397-418		33
1249	Antiplasticization and the elastic properties of glass-forming polymer liquids. <b>2010</b> , 6, 292-304		83
1248	Anharmonic and quasi-localized vibrations in jammed solids Modes for mechanical failure. <b>2010</b> , 90, 56001		119
1247	Quantitative Imaging of Concentrated Suspensions Under Flow. <b>2010</b> , 163-202		10
1246	ON THE DETERMINISTIC DESCRIPTION OF EARTHQUAKES. <b>2011</b> , 49,		43
1245	Cavitation and Crazing in Rod-Containing Nanocomposites. <b>2011</b> , 44, 5498-5509		53
1244	Modeling the mechanics of amorphous solids at different length scale and time scale. <b>2011</b> , 19, 083001		212
1243	Room temperature homogeneous flow in a bulk metallic glass with low glass transition temperature. <b>2011</b> , 98, 141913		103

1242	<b>2011</b> , 23, 295402	3
1241	Creep and fluidity of a real granular packing near jamming. <b>2011</b> , 107, 138303	62
1240	Characterization of nanoscale mechanical heterogeneity in a metallic glass by dynamic force microscopy. <b>2011</b> , 106, 125504	286
1239	Model of plasticity of amorphous materials. <i>Physical Review E</i> , <b>2011</b> , 84, 021502	2
1238	Theoretical perspective on the glass transition and amorphous materials. <b>2011</b> , 83, 587-645	1298
1237	Irreversible atomic rearrangements in elastically deformed metallic glasses. <b>2011</b> , 19, 86-92	4
1236	Deformation behaviors under tension and compression: Atomic simulation of Cu65Zr35 metallic glass. <b>2011</b> , 19, 1168-1173	15
1235	Viscous flow in sliding shear band formed during tensile deformation of hypoeutectic Zr-based metallic glass. <b>2011</b> , 19, 1683-1687	12
1234	Deformation and Failure of Amorphous, Solidlike Materials. <b>2011</b> , 2, 353-373	242
1233	Vibration-induced slip in sheared granular layers and the micromechanics of dynamic earthquake triggering. <b>2011</b> , 96, 14001	26
1232	Separating stretching from folding in fluid mixing. <b>2011</b> , 7, 477-480	34
1231	Onset of yielding and shear band nucleation in an Au-based bulk metallic glass. <b>2011</b> , 65, 759-762	31
1230	Thermally-activated atomic rearrangements in elastically deformed metallic glasses. <b>2011</b> , 126, 152-155	4
1229	Structural signature of plastic deformation in metallic glasses. <b>2011</b> , 106, 135503	183
1228	Connecting diffusion and dynamical heterogeneities in actively deformed amorphous systems. <b>2011</b> , 106, 156001	74
1227	Long-range strain correlations in sheared colloidal glasses. <b>2011</b> , 107, 198303	106
1226	Deformation of nanocrystalline materials in the formalism of coupled mode theory. <b>2011</b> , 46, 123-128	
1225	Tracer measurements of atomic diffusion inside shear bands of a bulk metallic glass. <b>2011</b> , 107, 235503	82

1224	Icosahedral coordination and atomic rearrangements in deformed metallic glasses. <b>2011</b> , 59, 5961-5969	3
1223	Effects of size on the strength and deformation mechanism in Zr-based metallic glasses. <b>2011</b> , 27, 858-867	131
1222	Intrinsic shear strength of metallic glass. <b>2011</b> , 59, 1800-1807	87
1221	Failure of heterogeneous materials: A dynamic phase transition?. <b>2011</b> , 498, 1-44	135
1220	How does the initial free volume distribution affect shear band formation in metallic glass?. <b>2011</b> , 54, 1488-1494	25
1219	Ductile Ti-Based Bulk Metallic Glasses with High Specific Strength. <b>2011</b> , 42, 1456-1462	32
1218	Tough Hypoeutectic Zr-Based Bulk Metallic Glasses. <b>2011</b> , 42, 1468-1475	20
1217	Bulk metallic glass: the smaller the better. <b>2011</b> , 23, 461-76	356
1216	Rotation of small clusters in sheared metallic glasses. <b>2011</b> , 386, 101-104	1
1215	Size dependent brittle to ductile transition in bubble rafts. <b>2011</b> , 382, 36-41	19
1214	Shear softening of grain boundaries in nanocrystalline Pd. <b>2011</b> , 59, 1523-1529	28
1213	Shear transformation zone volume determining ductile <b>B</b> rittle transition of bulk metallic glasses. <b>2011</b> , 59, 2057-2068	89
1212	On the shear-band direction in metallic glasses. <b>2011</b> , 59, 4159-4167	57
1211	Hidden order in serrated flow of metallic glasses. <b>2011</b> , 59, 4482-4493	57
1210	Shear-band toughness of bulk metallic glasses. <b>2011</b> , 59, 4525-4537	46
1209	Atomic level stresses. <b>2011</b> , 56, 637-653	227
1208	Plasticity in small-sized metallic systems: Intrinsic versus extrinsic size effect. <b>2011</b> , 56, 654-724	1272
1207	Atomistic simulation and modeling of localized shear deformation in metallic glasses. <b>2011</b> , 56, 785-816	62

1206	Connecting structural relaxation with the low frequency modes in a hard-sphere colloidal glass. <b>2011</b> , 107, 188303		42	
1205	Propagating mode-I fracture in amorphous materials using the continuous random network model. <i>Physical Review E</i> , <b>2011</b> , 84, 026102	2.4	9	
1204	NMR signature of evolution of ductile-to-brittle transition in bulk metallic glasses. <b>2011</b> , 107, 236403		37	
1203	How does spallation microdamage nucleate in bulk amorphous alloys under shock loading?. <b>2011</b> , 110, 103519		21	
1202	Vibrational modes identify soft spots in a sheared disordered packing. <b>2011</b> , 107, 108302		262	
1201	Linear response theory for hard and soft glassy materials. <b>2011</b> , 106, 148301		40	
1200	Amorphous silicon under mechanical shear deformations: Shear velocity and temperature effects. <b>2011</b> , 83,		7	
1199	Crystallization of amorphous silicon induced by mechanical shear deformations. <b>2011</b> , 84,		15	
1198	Mechanical noise dependent aging and shear banding behavior of a mesoscopic model of amorphous plasticity. <b>2011</b> , 84,		39	
1197	Correlation between relaxations and plastic deformation, and elastic model of flow in metallic glasses and glass-forming liquids. <b>2011</b> , 110, 053521		130	
1196	Shear-transformation-zone theory of linear glassy dynamics. <i>Physical Review E</i> , <b>2011</b> , 83, 061503	2.4	35	
1195	Atomic scale fluctuations govern brittle fracture and cavitation behavior in metallic glasses. <b>2011</b> , 107, 215501		144	
1194	Intrinsic size effects in the mechanical response of taper-free nanopillars of metallic glass. <b>2011</b> , 83,		76	
1193	Avalanches, precursors, and finite-size fluctuations in a mesoscopic model of amorphous plasticity. <i>Physical Review E</i> , <b>2011</b> , 84, 016115	2.4	86	
1192	Compression-compression fatigue study on model metallic glass nanowires by molecular dynamics simulations. <b>2011</b> , 110, 023523		20	
1191	Ductility of bulk metallic glass composites: Microstructural effects. <b>2011</b> , 98, 031909		29	
1190	Stick-slip dynamics and recent insights into shear banding in metallic glasses. <b>2011</b> , 26, 1453-1463		95	
1189	Failure criterion for metallic glasses. <b>2011</b> , 91, 4536-4554		40	

1188	Dislocationless sliding in a polycluster glass. <b>2011</b> , 102, 1147-1151	5
1187	Colloidal Glasses. <b>2011</b> , 25-39	3
1186	Investigation of Local Shear Transformation in a Metallic Glass by Means of High Amplitude Internal Friction Measurements. <b>2012</b> , 184, 411-415	
1185	Shear-induced anisotropic decay of correlations in hard-sphere colloidal glasses. <b>2012</b> , 100, 56001	34
1184	Dynamic mechanical analysis in La-based bulk metallic glasses: Secondary (Dand main (Herelaxations. <b>2012</b> , 112, 083528	37
1183	Signature of viscous flow units in apparent elastic regime of metallic glasses. <b>2012</b> , 101, 121906	121
1182	Correlating local structure with inhomogeneous elastic deformation in a metallic glass. <b>2012</b> , 101, 121917	42
1181	Inhomogeneous shear flows in soft jammed materials with tunable attractive forces. <i>Physical Review E</i> , <b>2012</b> , 85, 021503	49
1180	Length-scale dependence of elastic strain from scattering measurements in metallic glasses. <b>2012</b> , 85,	29
1179	Characterization of mechanical heterogeneity in amorphous solids. <b>2012</b> , 112, 023516	23
1178	Universality of the plastic instability in strained amorphous solids. <b>2012</b> , 108, 075701	32
1177	Elastic constants of langasite and alpha quartz at high temperatures measured by antenna transmission acoustic resonance. <b>2012</b> , 83, 073901	12
1176	Atomic mechanism of flow in simple liquids under shear. <b>2012</b> , 108, 196001	36
1175	Notable internal thermal effect on the yielding of metallic glasses. <b>2012</b> , 100, 141904	13
1174	Influence of network topology on sound propagation in granular materials. <i>Physical Review E</i> , <b>2012</b> , 86, 041306	79
1173	Properties inheritance in metallic glasses. <b>2012</b> , 111, 123519	30
1172	Micro-Brillouin spectroscopy mapping of the residual density field induced by Vickers indentation in a soda-lime silicate glass. <b>2012</b> , 100, 231901	15
1171	Meso-mechanical analysis of deformation characteristics for dynamically triggered slip in a granular medium. <b>2012</b> , 92, 3520-3539	12

1170	Hot spots in an athermal system. <b>2012</b> , 108, 135502	78
1169	Locally fluctuating cooling rate as possible reason for non-crystalline plasticity in metallic glasses. <b>2012</b> , 98, 16003	6
1168	3D mapping of deformation in an unconsolidated sand: A micro mechanical study. <b>2012</b> ,	2
1167	Electrostatic precursors to granular slip events. <b>2012</b> , 109, 10806-10	25
1166	Fracture toughness of metallic glasses: annealing-induced embrittlement. <b>2012</b> , 109, 194301	73
1165	Increased time-dependent room temperature plasticity in metallic glass nanopillars and its size-dependency. <b>2012</b> , 37, 108-118	77
1164	Enhanced plasticity of FeNbB(Ni, Cu) bulk metallic glasses by controlling the heterogeneity and elastic constants. <b>2012</b> , 536, S70-S73	9
1163	Schematic mode coupling theory of glass rheology: single and double step strains. <b>2012</b> , 8, 4244	15
1162	Delayed solidification of soft glasses: new experiments, and a theoretical challenge. <b>2012</b> , 158, 313-24; discussion 351-70	16
1161	Fast relaxation and elasticity-related properties of trehalose-glycerol mixtures. <b>2012</b> , 8, 4936	17
1160	Topological rearrangements and stress fluctuations in quasi-two-dimensional hopper flow of emulsions. <b>2012</b> , 8, 10486	26
1159	Tensile plasticity in metallic glasses with pronounced [Felaxations. 2012, 108, 015504	204
1158	Detection of hidden structures for arbitrary scales in complex physical systems. <b>2012</b> , 2, 329	31
1157	Sample size matters for Al88Fe7Gd5 metallic glass: Smaller is stronger. <b>2012</b> , 60, 5370-5379	93
1156	Ductile Fe-based amorphous alloy. <b>2012</b> , 552, 399-403	9
1155	Irreversible rearrangements and fertile regions in deformed metallic glasses. <b>2012</b> , 22, 203-209	3
1154	A mean-field model for anelastic deformation in metallic-glasses. <b>2012</b> , 26, 86-90	20
1153	A detailed study of atomic-scale rearrangements in sheared metallic glasses. <b>2012</b> , 513, 251-255	2

1152	Relation between Irelaxation and fragility in LaCe-based metallic glasses. 2012, 358, 869-871	40
1151	Perspective: Supercooled liquids and glasses. <b>2012</b> , 137, 080901	369
1150	Atomic mobility in strained glassy polymers: The role of fold catastrophes on the potential energy surface. <b>2012</b> , 50, 1733-1739	15
1149	Atomistic response of a model silica glass under shear and pressure. <b>2012</b> , 85, 1	63
1148	Current challenges for statistical physics in fracture and plasticity. <b>2012</b> , 85, 1	11
1147	How Deformation Enhances Mobility in a Polymer Glass. <b>2012</b> , 45, 4416-4421	33
1146	Viscoelastic phase separation in soft matter and foods. <b>2012</b> , 158, 371-406; discussion 493-522	44
1145	Local and non local rheology of concentrated particles. <b>2012</b> , 8, 4025	35
1144	CoreBhell microgels as model colloids for rheological studies. <b>2012</b> , 8, 4014	49
1143	Structure of Amorphous Materials. <b>2012</b> , 16, 455-465	1
1142	On the dynamical role of coherent structures in turbulence. <b>2012</b> , 13, 866-877	19
1141	Evaluating Mohr¶oulomb yield criterion for plastic flow in model metallic glasses. <b>2012</b> , 358, 3488-3494	18
1140	Relation between ideal and real strengths of metallic glasses. <b>2012</b> , 358, 3119-3123	2
1139	Scaling of critical velocity for bubble raft fracture under tension. <b>2012</b> , 56, 527-541	7
1138	Shear Banding in Bulk Metallic Glasses. <b>2012</b> , 311-361	4
1137	In situ Transmission Electron Microscopy on Metals. <b>2012</b> , 1099-1151	1
1136	Microstructure evolution during impact on granular matter. <i>Physical Review E</i> , <b>2012</b> , 85, 011305 2.4	56
1135	The viscous-brittle transition of crystal-bearing silicic melt: Direct observation of magma rupture and healing. <b>2012</b> , 40, 611-614	84

1134	The physics of the colloidal glass transition. <b>2012</b> , 75, 066501	389	
1133	The deformation units in metallic glasses revealed by stress-induced localized glass transition. <b>2012</b> , 111, 113522	28	
1132	On the characteristic length scales associated with plastic deformation in metallic glasses. <b>2012</b> , 100, 201901	18	
1131	Glass dynamics at high strain rates. <i>Physical Review E</i> , <b>2012</b> , 86, 011502	<b>4</b> 16	
1130	Nonaffine measures of particle displacements in sheared colloidal glasses. <i>Physical Review E</i> , <b>2012</b> , 85, 031402	1 54	
1129	Microstructural model for the plasticity of amorphous solids. <b>2012</b> , 125, 4376-4389	7	
1128	Shear-transformation-zone theory of viscosity, diffusion, and stretched exponential relaxation in amorphous solids. <i>Physical Review E</i> , <b>2012</b> , 85, 051507	<b>4</b> 19	
1127	Nonequilibrium thermodynamics in sheared hard-sphere materials. <i>Physical Review E</i> , <b>2012</b> , 85, 061308 2	4 21	
1126	Designing Zr-Cu-Co-Al Bulk Metallic Glasses with Phase Separation Mediated Plasticity. <b>2012</b> , 43, 2598-260	3 29	
1125	Intrinsic and extrinsic size effects in the deformation of metallic glass nanopillars. 2012, 60, 889-898	131	
1124	Serrated flow and sticklip deformation dynamics in the presence of shear-band interactions for a Zr-based metallic glass. <b>2012</b> , 60, 4160-4171	169	
1123	Strain localization and anisotropic correlations in a mesoscopic model of amorphous plasticity. <b>2012</b> , 340, 275-288	45	
1122	Thermal activation of atomic rearrangements in elastically deformed Ni50Zr50 metallic glasses. <b>2012</b> , 132, 889-894	2	
1121	Strain rate dependent plastic mutation in a bulk metallic glass under compression. <b>2012</b> , 36, 284-288	20	
1120	Different icosahedra in metallic glasses: Stability and response to shear transformation. <b>2012</b> , 66, 610-613	7	
1119	The activation energy and volume of flow units of metallic glasses. <b>2012</b> , 67, 9-12	122	
1118	Thermodynamic, corrosion and mechanical properties of Zr-based bulk metallic glasses in relation to heterogeneous structures. <b>2012</b> , 534, 157-162	5	
1117	The elastic properties, elastic models and elastic perspectives of metallic glasses. <b>2012</b> , 57, 487-656	898	

1116	Simulations of a stretching bar using a plasticity model from the shear transformation zone theory. <b>2012</b> , 231, 2155-2179	28
1115	Mapping forces in a 3D elastic assembly of grains. <b>2012</b> , 60, 55-66	55
1114	Non-linear oscillatory rheological properties of a generic continuum foam model: comparison with experiments and shear-banding predictions. <b>2012</b> , 35, 51	2
1113	Nonequilibrium thermodynamics and glassy rheology. <b>2013</b> , 9, 8786	9
1112	The Irelaxation in metallic glasses: an overview. <b>2013</b> , 16, 183-191	243
1111	Estimate of the maximum strength of metallic glasses from finite deformation theory. <b>2013</b> , 111, 065507	9
1110	Nanometallic glasses: size reduction brings ductility, surface state drives its extent. <b>2013</b> , 13, 4462-8	103
1109	On the notch sensitivity of CuZr metallic glasses. <b>2013</b> , 103, 081903	60
1108	Real-time, high-resolution study of nanocrystallization and fatigue cracking in a cyclically strained metallic glass. <b>2013</b> , 110, 19725-30	55
1107	A quasi-phase perspective on flow units of glass transition and plastic flow in metallic glasses. <b>2013</b> , 376, 76-80	39
1106	Asperity Creep Under Constant Displacement. <b>2013</b> , 17-39	
1105	Imaging atomic rearrangements in two-dimensional silica glass: watching silica's dance. <b>2013</b> , 342, 224-7	162
1104	Strain-rate and temperature-driven transition in the shear transformation zone for two-dimensional amorphous solids. <i>Physical Review E</i> , <b>2013</b> , 88, 042404	28
1103	A transition from localized shear banding to homogeneous superplastic flow in nanoglass. <b>2013</b> , 103, 211905	93
1102	Linking high- and low-temperature plasticity in bulk metallic glasses: thermal activation, extreme value statistics and kinetic freezing. <b>2013</b> , 93, 4232-4263	20
1101	Spatiotemporal heterogeneity of local free volumes in highly supercooled liquid. <b>2013</b> , 139, 184502	2
1100	Nanoscale creep deformation in Zr-based metallic glass. <b>2013</b> , 38, 156-160	37
1099	Enhancing the plasticity of metallic glasses: Shear band formation, nanocomposites and nanoglasses investigated by molecular dynamics simulations. <b>2013</b> , 67, 94-103	132

1098	The jamming perspective on wet foams. <b>2013</b> , 9, 9739	43
1097	Low-energy non-linear excitations in sphere packings. <b>2013</b> , 9, 8252	104
1096	Micromechanics of emergent patterns in plastic flows. <b>2013</b> , 3, 2728	14
1095	Heterogeneously randomized STZ model of metallic glasses: Softening and extreme value statistics during deformation. <b>2013</b> , 40, 1-22	65
1094	Colloidal Particles: Crystals, Glasses, and Gels. <b>2013</b> , 4, 217-233	179
1093	Mechanical Properties of Metallic Glasses. <b>2013</b> , 3, 77-113	84
1092	Cavitation instabilities in bulk metallic glasses. <b>2013</b> , 50, 1364-1372	17
1091	Microbranching in mode-I fracture in a randomly perturbed lattice. <i>Physical Review E</i> , <b>2013</b> , 88, 022401 2.4	5
1090	Shear transformation zone dynamics model for metallic glasses incorporating free volume as a state variable. <b>2013</b> , 61, 3347-3359	117
1089	Strain rate dependent shear banding behavior of a Zr-based bulk metallic glass composite. <b>2013</b> , 576, 134-139	37
1088	Transition of nano-scale to micro-scale on fracture surface of Zr65Cu17.5Ni10Al7.5 bulk metallic glass. <b>2013</b> , 105, 101-109	2
1087	Effects of pre-introduced shear origin zones on mechanical property of ZrCu metallic glass. <b>2013</b> , 373-374, 1-4	13
1086	Stress-versus temperature-induced structural evolution in metallic glasses. <b>2013</b> , 102, 131908	10
1085	Evolution of structural and dynamic heterogeneities and activation energy distribution of deformation units in metallic glass. <b>2013</b> , 102, 101903	73
1084	Yielding and microstructure in a 2D jammed material under shear deformation. <b>2013</b> , 9, 6222	69
1083	Origin of intermittent plastic flow and instability of shear band sliding in bulk metallic glasses. <b>2013</b> , 110, 225501	64
1082	Micro-alloying and the toughness of glasses: Modeling with pinned particles. <b>2013</b> , 102, 191904	6
1081	Shear bands in metallic glasses. <b>2013</b> , 74, 71-132	1018

1080	Cavitation in amorphous solids. <b>2013</b> , 110, 185502		56
1079	Scaling theory of continuum dislocation dynamics in three dimensions: Self-organized fractal pattern formation. <b>2013</b> , 46, 94-129		29
1078	Method to account for arbitrary strains in kinetic Monte Carlo simulations. 2013, 87,		25
1077	Heterogeneous relaxation dynamics in amorphous materials under cyclic loading. <i>Physical Review E</i> , <b>2013</b> , 87, 052302	2.4	63
1076	Onset of sliding in amorphous films triggered by high-frequency oscillatory shear. <b>2013</b> , 110, 248301		16
1075	Ductile necking behavior of nanoscale metallic glasses under uniaxial tension at room temperature. <b>2013</b> , 61, 4823-4830		64
1074	Structural origins for the high plasticity of a ZrtuNiAl bulk metallic glass. 2013, 61, 321-330		23
1073	Time-Dependent Mechanochemical Response of SP-Cross-Linked PMMA. <b>2013</b> , 46, 8917-8921		53
1072	A mesoscopic model for the rheology of soft amorphous solids, with application to microchannel flows. <b>2013</b> , 167, 567-600		19
1071	Collective evolution dynamics of multiple shear bands in bulk metallic glasses. <b>2013</b> , 50, 18-36		56
1070	Facilitation and correlation of flow in metallic supercooled liquid. 2013, 139, 164508		14
1069	A Depinning Model for Creep and Plasticity of Disordered Materials. 2013,		
1068	Quantifying stretching and rearrangement in epithelial sheet migration. 2013, 15,		28
1067	Accelerated molecular dynamics through stochastic iterations and collective variable based basin identification. <b>2013</b> , 87,		25
1066	Nonaffine displacements in crystalline solids in the harmonic limit. <i>Physical Review E</i> , <b>2013</b> , 87, 042801	2.4	32
1065	Spatial cooperativity in microchannel flows of soft jammed materials: a mesoscopic approach. <b>2013</b> , 110, 138304		43
1064	Single-particle fluctuations and directional correlations in driven hard-sphere glasses. <i>Physical Review E</i> , <b>2013</b> , 88, 022129	2.4	19
1063	Onset of irreversibility and chaos in amorphous solids under periodic shear. <i>Physical Review E</i> , <b>2013</b> , 88, 062401	2.4	112

1062	Structural perspectives on the elastic and mechanical properties of metallic glasses. <b>2013</b> , 114, 173505	47
1061	Characterization of flow units in metallic glass through density variation. <b>2013</b> , 114, 123514	36
1060	Yield-strain and shear-band direction in amorphous solids under two-dimensional uniaxial loading.  Physical Review E, <b>2013</b> , 88, 022310  2.4	12
1059	Yield strain in shear banding amorphous solids. <i>Physical Review E</i> , <b>2013</b> , 87, 022810 2.4	39
1058	The seismic cycle at subduction thrusts: 2. Dynamic implications of geodynamic simulations validated with laboratory models. <b>2013</b> , 118, 1502-1525	58
1057	Probing incipient plasticity by indenting colloidal glasses. <b>2013</b> , 3, 1064	10
1056	Crystallization-aided extraordinary plastic deformation in nanolayered crystalline Cu/amorphous Cu-Zr micropillars. <b>2013</b> , 3, 2324	29
1055	Inelastic behavior of non-polymeric glasses. 174-227	1
1054	Application of External Fields to Technology of Metal-Matrix Composite Materials. 2013, 1037-1044	6
1053	Effective temperature dynamics of shear bands in metallic glasses. <i>Physical Review E</i> , <b>2014</b> , 90, 062405 2.4	17
1052	Evolution of covalent networks under cooling: contrasting the rigidity window and jamming scenarios. <b>2014</b> , 113, 215504	18
1051	Prediction of Spontaneous Plastic Deformation of Irradiated Metallic Glasses due to Thermal Spike-Induced Plasticity. <b>2014</b> , 2, 221-226	8
1050	Two-temperature continuum thermomechanics of deforming amorphous solids. <b>2014</b> , 73, 269-288	43
1049	Simulation study of mechanical properties of bulk metallic glass systems: martensitic inclusions and twinned precipitates. <b>2014</b> , 22, 085008	3
1048	Nonlinear glassy rheology. <b>2014</b> , 19, 549-560	38
1047	Large-amplitude thermal oscillations in defected, tilted nanocolumns. <b>2014</b> , 105, 193107	
1046	A Hybrid Molecular Dynamics/Atomic-Scale Finite Element Method for Quasi-Static Atomistic Simulations at Finite Temperature. <b>2014</b> , 81,	3
1045	Cryogenic-temperature-induced transition from shear to dilatational failure in metallic glasses. <b>2014</b> , 77, 248-257	38

1044 Fast x-ray micro-tomography imaging study of granular packing under tapping. **2014**,

1043	Predicting plasticity with soft vibrational modes: from dislocations to glasses. <i>Physical Review E</i> , <b>2014</b> , 89, 042304	2.4	50
1042	Density scaling and quasiuniversality of flow-event statistics for athermal plastic flows. <i>Physical Review E</i> , <b>2014</b> , 90, 052304	2.4	14
1041	Rheology of weakly vibrated granular media. <i>Physical Review E</i> , <b>2014</b> , 89, 012202	2.4	26
1040	Local shear transformations in deformed and quiescent hard-sphere colloidal glasses. <i>Physical Review E</i> , <b>2014</b> , 90, 042305	2.4	57
1039	Local structural excitations in model glasses. <b>2014</b> , 89,		29
1038	Local-heterogeneous responses and transient dynamics of cage breaking and formation in colloidal fluids. <b>2014</b> , 141, 104907		2
1037	Effect of aspect ratio on the mechanical properties of metallic glasses. <b>2014</b> , 93, 36-39		38
1036	Ductile-to-brittle transition in spallation of metallic glasses. <b>2014</b> , 116, 143503		22
1035	Correlations of plasticity in sheared glasses. <i>Physical Review E</i> , <b>2014</b> , 89, 040301	2.4	23
1034	Shear flow of angular grains: acoustic effects and nonmonotonic rate dependence of volume. <i>Physical Review E</i> , <b>2014</b> , 90, 032204	2.4	13
1033	Visualizing the strain evolution during the indentation of colloidal glasses. <i>Physical Review E</i> , <b>2014</b> , 89, 012304	2.4	14
1032	Delayed shear banding and evolution of local plastic flow in a metallic glass. <b>2014</b> , 105, 091904		15
1031	Grain fragmentation in sheared granular flow: weakening effects, energy dissipation, and strain localization. <i>Physical Review E</i> , <b>2014</b> , 89, 022203	2.4	17
1030	Mechanical properties and plasticity of a model glass loaded under stress control. <i>Physical Review E</i> , <b>2014</b> , 90, 052402	2.4	6
1029	Effect of Voronoi volume on fluctuation at initial deformation of amorphous alloys. <b>2014</b> , 116, 133520		14
1028	Variable-amplitude oscillatory shear response of amorphous materials. <i>Physical Review E</i> , <b>2014</b> , 89, 062	3 <b>0</b> .7	21
1027	Local fluctuations and spatial correlations in granular flows under constant-volume quasistatic shear. <i>Physical Review E</i> , <b>2014</b> , 89, 042208	2.4	28

1026 Microscopic origin of nonlinear nonaffine deformation in bulk metallic glasses. <b>2014</b> , 90,		36
1025 Emergence of cooperativity in plasticity of soft glassy materials. <b>2014</b> , 112, 246001		70
Time-dependent elastic response to a local shear transformation in amorphous solids. <i>Physical Review E</i> , <b>2014</b> , 89, 042302	2.4	49
1023 Surface shear-transformation zones in amorphous solids. <i>Physical Review E</i> , <b>2014</b> , 90, 012311	2.4	11
Robust scaling of strength and elastic constants and universal cooperativity in disordered colloidal micropillars. <b>2014</b> , 111, 18167-72		8
1021 Rheology of aqueous foams. <b>2014</b> , 15, 731-747		52
1020 How does a thermal binary crystal break under shear?. <b>2014</b> , 141, 224505		5
1019 Atomistic interpretation of the dynamic response of glasses. <b>2014</b> , 4, 63-66		10
Capture of Shear Crack Propagation in Metallic Glass by High-Speed Camera and In Situ SEM. <b>2014</b> , 626, 162-170		1
1017 The Eelaxation in metallic glasses. <b>2014</b> , 1, 429-461		160
The Felaxation in metallic glasses. <b>2014</b> , 1, 429-461  1016 On the density of shear transformations in amorphous solids. <b>2014</b> , 105, 26003		<ul><li>160</li><li>68</li></ul>
On the density of shear transformations in amorphous solids. <b>2014</b> , 105, 26003  Crossover from random three-dimensional avalanches to correlated nano shear bands in metallic		68
On the density of shear transformations in amorphous solids. <b>2014</b> , 105, 26003  Crossover from random three-dimensional avalanches to correlated nano shear bands in metallic glasses. <b>2014</b> , 5, 3616		68 69
On the density of shear transformations in amorphous solids. <b>2014</b> , 105, 26003  Crossover from random three-dimensional avalanches to correlated nano shear bands in metallic glasses. <b>2014</b> , 5, 3616  Shear-induced volumetric strain in CuZr metallic glass. <b>2014</b> , 83, 99-106		68 69 3
On the density of shear transformations in amorphous solids. <b>2014</b> , 105, 26003  Crossover from random three-dimensional avalanches to correlated nano shear bands in metallic glasses. <b>2014</b> , 5, 3616  Shear-induced volumetric strain in CuZr metallic glass. <b>2014</b> , 83, 99-106  Wear, Plasticity, and Rehybridization in Tetrahedral Amorphous Carbon. <b>2014</b> , 53, 119-126		68 69 3 75
On the density of shear transformations in amorphous solids. 2014, 105, 26003  Crossover from random three-dimensional avalanches to correlated nano shear bands in metallic glasses. 2014, 5, 3616  Shear-induced volumetric strain in CuZr metallic glass. 2014, 83, 99-106  Wear, Plasticity, and Rehybridization in Tetrahedral Amorphous Carbon. 2014, 53, 119-126  The dynamics of rapid fracture: instabilities, nonlinearities and length scales. 2014, 77, 046501		68 69 3 75 61

1008	Nonequilibrium thermodynamics of the shear-transformation-zone model. <i>Physical Review E</i> , <b>2014</b> , 89, 022137	4	8
1007	Improving the plasticity of bulk metallic glasses via pre-compression below the yield stress. <b>2014</b> , 602, 68-76		23
1006	Three-dimensional discrete element modeling of triggered slip in sheared granular media. <i>Physical Review E</i> , <b>2014</b> , 89, 042204	4	30
1005	Nanostructured solids (From nano-glasses to quantum transistors. <b>2014</b> , 9, 17-68		91
1004	Plastic deformation behavior of FettoBBitNbttr bulk metallic glasses under nanoindentation. <b>2014</b> , 587, 415-419		20
1003	Computational modelling of submicron-sized metallic glasses. <b>2014</b> , 94, 1-19		18
1002	Calorimetric study of Erelaxation in an amorphous alloy: An experimental technique for measuring the activation energy for shear transformation. <b>2014</b> , 44, 116-120		23
1001	Cavitation during deformation of semicrystalline polymers. <b>2014</b> , 39, 921-958		196
1000	Mechanical and microscopic properties of the reversible plastic regime in a 2D jammed material. <b>2014</b> , 112, 028302		87
999	Correlation between flow and relaxation dynamics in supercooled metallic liquid. <b>2014</b> , 587, 506-510		2
998	Self-toughening crystalline Cu/amorphous Cullr nanolaminates: Deformation-induced devitrification. <b>2014</b> , 66, 22-31		39
997	Measurement of Segmental Mobility during Constant Strain Rate Deformation of a Poly(methyl methacrylate) Glass. <b>2014</b> , 47, 800-806		58
996	Crackling noise in plasticity. <b>2014</b> , 223, 2353-2367		23
995	Driven colloidal suspensions in confinement and density functional theory: microstructure and wall-slip. <b>2014</b> , 140, 094701		25
994	Size and density avalanche scaling near jamming. <b>2014</b> , 10, 2728-32		11
993	Structural skeleton of preferentially interpenetrated clusters and correlation with shear localization in Mg-Cu-Ni ternary metallic glasses. <b>2014</b> , 16, 19590-601		15
992	Boundary conditions for soft glassy flows: slippage and surface fluidization. <b>2014</b> , 10, 6984-9		35
991	Linking high- and low-temperature plasticity in bulk metallic glasses II: use of a log-normal barrier energy distribution and a mean-field description of high-temperature plasticity. <b>2014</b> , 94, 2776-2803		14

## (2014-2014)

990	Microscopic description of flow defects and relaxation in metallic glasses. <i>Physical Review E</i> , <b>2014</b> , 90, 042313	22
989	A microscopic view of the yielding transition in concentrated emulsions. <b>2014</b> , 10, 6931-40	81
988	Universal and non-universal features in coarse-grained models of flow in disordered solids. <b>2014</b> , 10, 4648-61	35
987	Synthesis and mechanical response of disordered colloidal micropillars. <b>2014</b> , 16, 10274-85	10
986	Scaling description of the yielding transition in soft amorphous solids at zero temperature. <b>2014</b> , 111, 14382-7	165
985	Strain localization in glassy polymers under cylindrical confinement. <b>2014</b> , 16, 10301-9	22
984	Evolution of atomic rearrangements in deformation in metallic glasses. <i>Physical Review E</i> , <b>2014</b> , 90, 0423 <u>0</u> 3	10
983	Fracture morphology pattern transition dominated by the crack tip curvature radius in brittle metallic glasses. <b>2014</b> , 617, 89-96	5
982	Irreversible dynamics, Onsager-Casimir symmetry, and an application to turbulence. <i>Physical Review E</i> , <b>2014</b> , 90, 042121	8
981	A comprehensive constitutive law for waxy crude oil: a thixotropic yield stress fluid. <b>2014</b> , 10, 6619-44	138
980	Computer simulation of rearrangements in chains of glassy polymethylene subjected at low temperature inelastic deformation. <b>2014</b> , 56, 511-521	5
979	Elastic and plastic characteristics of a model Cu <b>I</b> r amorphous alloy. <b>2014</b> , 614, 16-26	4
978	Plasticity of a colloidal polycrystal under cyclic shear. <b>2014</b> , 113, 078301	24
977	Mechanical annealing in the flow of supercooled metallic liquid. <b>2014</b> , 116, 053522	2
976	Structural origins of Johari-Goldstein relaxation in a metallic glass. <b>2014</b> , 5, 3238	117
975	Spatiotemporal correlations between plastic events in the shear flow of athermal amorphous solids. <b>2014</b> , 37, 9	36
974	Soft spots and their structural signature in a metallic glass. <b>2014</b> , 111, 14052-6	269
973	How thermally activated deformation starts in metallic glass. <b>2014</b> , 5, 5083	136

972 Description of deformations in the elastic strain engineering of nanostructure. **2014**, 94, 279-284

971	Metallic Glasses. <b>2014</b> , 305-385	20
970	Understanding Plastic Deformation in Thermal Glasses from Single-Soft-Spot Dynamics. <b>2014</b> , 4,	26
969	Direct visualization of free-volume-mediated diffusion in colloidal glass. <b>2014</b> , 90-91, 21-24	2
968	Microdynamics of dense colloidal suspensions and gels under constant-stress deformation. <b>2014</b> , 58, 1419-1439	8
967	Plastic Flow of a Cu50Zr45Ti5 Bulk Metallic Glass Composite. <b>2014</b> , 30, 609-615	23
966	Onset and Direction of Shear Banding Instability in Metallic Glasses. <b>2014</b> , 30, 616-621	6
965	Structure Heterogeneity in Metallic Glass: Modeling and Experiment. <b>2014</b> , 30, 560-565	39
964	Pure shear stress reversal on a Cu-based bulk metallic glass reveals a Bauschinger-type effect. <b>2014</b> , 615, S75-S78	10
963	Effect of boundary vibration on the frictional behavior of a dense sheared granular layer. <b>2014</b> , 225, 2227-223	716
962	Rheological properties vs. local dynamics in model disordered materials at low temperature. <b>2014</b> , 37, 43	15
961	Strain-rate and temperature dependence of yield stress of amorphous solids via a self-learning metabasin escape algorithm. <b>2014</b> , 68, 239-250	26
960	A comprehensive atomistic analysis of the experimental dynamic-mechanical response of a metallic glass. <b>2014</b> , 74, 183-188	41
959	Correlation Between Local Atomic Symmetry and Mechanical Properties in Metallic Glasses. <b>2014</b> , 30, 551-559	18
958	A two-scale model for sheared fault gouge: Competition between macroscopic disorder and local viscoplasticity. <b>2014</b> , 119, 4841-4859	11
957	Aging in amorphous solids: A study of the first-passage time and persistence time distributions. <b>2015</b> , 111, 48004	5
956	Avalanches in Slowly Sheared Disordered Materials. <b>2015</b> , 307-336	
955	Stress-driven crystallization via shear-diffusion transformations in a metallic glass at very low temperatures. <b>2015</b> , 91,	21

## (2015-2015)

954	Universal enthalpy-entropy compensation rule for the deformation of metallic glasses. <b>2015</b> , 92,		16
953	Deformation-driven diffusion and plastic flow in amorphous granular pillars. <i>Physical Review E</i> , <b>2015</b> , 91, 062212	2.4	27
952	Shear-transformation-zone theory of yielding in athermal amorphous materials. <i>Physical Review E</i> , <b>2015</b> , 92, 012318	2.4	23
951	Strain fluctuations and elastic moduli in disordered solids. <i>Physical Review E</i> , <b>2015</b> , 92, 022307	2.4	5
950	Avalanche-size distributions in mean-field plastic yielding models. <i>Physical Review E</i> , <b>2015</b> , 92, 042135	2.4	13
949	Correlations of strain and plasticity in a flowing foam. <b>2015</b> , 112, 36004		4
948	Experimental observation of local rearrangements in dense quasi-two-dimensional emulsion flow. <i>Physical Review E</i> , <b>2015</b> , 91, 062306	2.4	14
947	Mechanical fluctuations suppress the threshold of soft-glassy solids: The secular drift scenario. <i>Physical Review E</i> , <b>2015</b> , 92, 020201	2.4	15
946	Stick-slip instabilities in sheared granular flow: The role of friction and acoustic vibrations. <i>Physical Review E</i> , <b>2015</b> , 92, 022209	2.4	23
945	Theory of rheology in confinement. <i>Physical Review E</i> , <b>2015</b> , 92, 042301	2.4	15
945	Theory of rheology in confinement. <i>Physical Review E</i> , <b>2015</b> , 92, 042301  Crossover from Localized to Cascade Relaxations in Metallic Glasses. <b>2015</b> , 115, 045501	2.4	73
		2.4	
944	Crossover from Localized to Cascade Relaxations in Metallic Glasses. <b>2015</b> , 115, 045501	2.4	73
944	Crossover from Localized to Cascade Relaxations in Metallic Glasses. 2015, 115, 045501  Fluid-Driven Deformation of a Soft Granular Material. 2015, 5,  Reformation Capability of Short-Range Order and Their Medium-Range Connections Regulates	2.4	73
944 943 942	Crossover from Localized to Cascade Relaxations in Metallic Glasses. 2015, 115, 045501  Fluid-Driven Deformation of a Soft Granular Material. 2015, 5,  Reformation Capability of Short-Range Order and Their Medium-Range Connections Regulates Deformability of Bulk Metallic Glasses. 2015, 5, 12177	2.4	73 23 3
944 943 942 941	Crossover from Localized to Cascade Relaxations in Metallic Glasses. 2015, 115, 045501  Fluid-Driven Deformation of a Soft Granular Material. 2015, 5,  Reformation Capability of Short-Range Order and Their Medium-Range Connections Regulates Deformability of Bulk Metallic Glasses. 2015, 5, 12177  Imprinting bulk amorphous alloy at room temperature. 2015, 5, 16540	2.4	73 23 3
944 943 942 941 940	Crossover from Localized to Cascade Relaxations in Metallic Glasses. 2015, 115, 045501  Fluid-Driven Deformation of a Soft Granular Material. 2015, 5,  Reformation Capability of Short-Range Order and Their Medium-Range Connections Regulates Deformability of Bulk Metallic Glasses. 2015, 5, 12177  Imprinting bulk amorphous alloy at room temperature. 2015, 5, 16540  Reversibility and criticality in amorphous solids. 2015, 6, 8805	2.4	73 23 3 7

936	Pre-yield non-affine fluctuations and a hidden critical point in strained crystals. <b>2015</b> , 5, 10644	5
935	Revealing localized plastic flow in apparent elastic region before yielding in metallic glasses. <b>2015</b> , 118, 244901	16
934	Computational modeling of rubber-toughening in amorphous thermoplastic polymers: a review. <b>2015</b> , 196, 207-222	9
933	Shear-Band Dynamics in Metallic Glasses. <b>2015</b> , 25, 2353-2368	157
932	Avalanches and diffusion in bubble rafts. <b>2015</b> , 111, 28001	6
931	Identifying structural flow defects in disordered solids using machine-learning methods. <b>2015</b> , 114, 108001	206
930	Probing stochastic nano-scale inelastic events in stressed amorphous metal. <b>2014</b> , 4, 6699	13
929	Tuning order in disorder. <b>2015</b> , 14, 547-52	209
928	Spreading plastic failure as a mechanism for the shear modulus reduction in amorphous solids. <b>2015</b> , 110, 48001	5
927	Serration Dynamics in a Zr-Based Bulk Metallic Glass. <b>2015</b> , 46, 2404-2414	18
926	Conjugated distribution of shear bands in a CuZr-based bulk metallic glass subjected to severe deformation. <b>2015</b> , 639, 389-394	2
925	Vickers-indentation-induced crystallization in a metallic glass. <b>2015</b> , 106, 101909	8
924	Statistics of non-affine defect precursors: tailoring defect densities in colloidal crystals using external fields. <b>2015</b> , 11, 4517-26	18
923	Fluctuations in flows near jamming. <b>2015</b> , 11, 7024-31	14
922	Understanding ductile-to-brittle transition of metallic glasses from shear transformation zone dilatation. <b>2015</b> , 5, 200-204	10
921	Marginal Stability in Structural, Spin, and Electron Glasses. <b>2015</b> , 6, 177-200	121
920	On the strain rate sensitivity of plastic flow in metallic glasses. <b>2015</b> , 625, 245-251	68
919	Ductility and work hardening in nano-sized metallic glasses. <b>2015</b> , 106, 061903	18

# (2015-2015)

918	Propensity of bond exchange as a window into the mechanical properties of metallic glasses. <b>2015</b> , 106, 061910	9
917	Local elastic constants of LacI and implications for allostery. <b>2015</b> , 57, 106-13	4
916	On the applicability of a mesoscopic interface sliding controlled model for understanding superplastic flow in bulk metallic glasses. <b>2015</b> , 60, 50-57	6
915	Mechanical properties and structural features of novel Fe-based bulk metallic glasses with unprecedented plasticity. <b>2014</b> , 4, 6233	85
914	A study of lattice elasticity from low entropy metals to medium and high entropy alloys. <b>2015</b> , 101, 32-35	46
913	Affine and nonaffine motions in sheared polydisperse emulsions. <i>Physical Review E</i> , <b>2015</b> , 91, 010301 2.4	11
912	The ductile to brittle transition behavior in a Zr-based bulk metallic glass. 2015, 625, 393-402	23
911	Elastic consequences of a single plastic event: Towards a realistic account of structural disorder and shear wave propagation in models of flowing amorphous solids. <b>2015</b> , 78, 333-351	13
910	Mechanical annealing in the homogeneous deformation of bulk metallic glass under elastostatic compression. <b>2015</b> , 102, 67-70	22
909	Atomic structure of shear bands in Cu64Zr36 metallic glasses studied by molecular dynamics simulations. <b>2015</b> , 95, 236-243	77
908	The role of time in activation of flow units in metallic glasses. <b>2015</b> , 67, 47-51	16
907	Creep and flow of glasses: strain response linked to the spatial distribution of dynamical heterogeneities. <b>2015</b> , 5, 11884	68
906	The mechanism of power-law scaling behavior by controlling shear bands in bulk metallic glass. <b>2015</b> , 639, 663-670	27
905	The fracture of bulk metallic glasses. <b>2015</b> , 74, 211-307	315
904	Intrinsic versus extrinsic effects on serrated flow of bulk metallic glasses. <b>2015</b> , 66, 31-39	29
903	Mechanical response of Ti-based bulk metallic glass under plate-impact compression. <b>2015</b> , 63, 12-18	12
902	Characteristics of stress relaxation kinetics of La 60 Ni 15 Al 25 bulk metallic glass. <b>2015</b> , 98, 43-50	74
901	Amorphous Alloys/Bulk Metallic Glasses (BMG). <b>2015</b> , 59-83	

900	Shear-induced rigidity in athermal materials: A unified statistical framework. <i>Physical Review E</i> , <b>2015</b> , 91, 042201	2.4	11
899	Anisotropic stress correlations in two-dimensional liquids. <i>Physical Review E</i> , <b>2015</b> , 91, 032301	2.4	22
898	Atomic picture of elastic deformation in a metallic glass. <b>2015</b> , 5, 9184		21
897	Anisotropic elasticity of experimental colloidal Wigner crystals. <i>Physical Review E</i> , <b>2015</b> , 91, 032310	2.4	11
896	A molecular dynamics simulation study of solid-like and liquid-like networks in Zr 46 Cu 46 Al 8 metallic glass. <b>2015</b> , 422, 39-45		11
895	Plastic deformation of a model glass induced by a local shear transformation. <i>Physical Review E</i> , <b>2015</b> , 91, 032412	2.4	6
894	Energy filtering transmission electron microscopy and atomistic simulations of tribo-induced hybridization change of nanocrystalline diamond coating. <b>2015</b> , 87, 317-329		54
893	Fast evaluation of local elastic constants and its application to nanosized structures. <b>2015</b> , 91,		4
892	Kinematic flow patterns in slow deformation of a dense granular material. <b>2015</b> , 17, 553-565		4
891	Inhomogeneous creep deformation in metallic glasses. <b>2015</b> , 648, 57-60		15
890	Role of string-like collective atomic motion on diffusion and structural relaxation in glass forming Cu-Zr alloys. <b>2015</b> , 142, 164506		67
889	Geometry and mechanics of two-dimensional defects in amorphous materials. <b>2015</b> , 112, 10873-8		26
888	Image-Based Lagrangian Analysis of Granular Kinematics. <b>2015</b> , 29, 04014101		20
887	Dependence of shear yield strain and shear transformation zone on the glass transition temperature in thin film metallic glasses. <b>2015</b> , 652, 191-199		9
886	On the source of plastic flow in metallic glasses: Concepts and models. <b>2015</b> , 67, 81-86		82
885	Probing relevant ingredients in mean-field approaches for the athermal rheology of yield stress materials. <b>2015</b> , 11, 7639-47		24
884	Role of disorder in finite-amplitude shear of a 2D jammed material. <b>2015</b> , 11, 1539-46		23
883	Simulation of the Elastic and Ultimate Tensile Properties of Diamond, Graphene, Carbon Nanotubes, and Amorphous Carbon Using a Revised ReaxFF Parametrization. <b>2015</b> , 119, 9710-21		74

## (2016-2015)

882	Velocity-Dependent Strongest Size. <b>2015</b> , 15, 6582-5	27
881	Fractal atomic-level percolation in metallic glasses. <b>2015</b> , 349, 1306-10	93
880	Non-local rheology in dense granular flows: Revisiting the concept of fluidity. <b>2015</b> , 38, 125	87
879	An Eulerian projection method for quasi-static elastoplasticity. <b>2015</b> , 300, 136-166	14
878	Transition from elasticity to plasticity in Zr35Cu65 metallic glasses: A molecular dynamics study. <b>2015</b> , 430, 94-98	14
877	Bridging shear transformation zone to the atomic structure of amorphous solids. <b>2015</b> , 410, 100-105	3
876	Helical flow in three-dimensional nonstationary anisotropic heterogeneous porous media. <b>2015</b> , 51, 261-280	25
875	Effect of atomic-level stresses on local dynamic and mechanical properties in CuxZr100⊠ metallic glasses: A molecular dynamics study. <b>2015</b> , 58, 50-55	13
874	The role of local structure in dynamical arrest. <b>2015</b> , 560, 1-75	270
873	Origin of stress overshoot in amorphous solids. <b>2015</b> , 81, 72-83	60
872	A first principles molecular dynamics study of the relationship between atomic structure and elastic properties of MgInIIa amorphous alloys. <b>2015</b> , 96, 246-255	17
8 <sub>72</sub>		17 3
·	properties of Mg@n@a amorphous alloys. <b>2015</b> , 96, 246-255	17 3 85
871	properties of MgInIIa amorphous alloys. <b>2015</b> , 96, 246-255  Statistical-mechanics based modeling of anisotropic viscoplastic deformation. <b>2015</b> , 80, 37-51	3
871	properties of MgZnZa amorphous alloys. 2015, 96, 246-255  Statistical-mechanics based modeling of anisotropic viscoplastic deformation. 2015, 80, 37-51  Brittle to ductile transition in densified silica glass. 2014, 4, 5035  On the Modelling of the Transient Flow Behavior of Metallic Glasses: Analogy with Portevin-Le	3 85
871 870 869	properties of MgInIta amorphous alloys. 2015, 96, 246-255  Statistical-mechanics based modeling of anisotropic viscoplastic deformation. 2015, 80, 37-51  Brittle to ductile transition in densified silica glass. 2014, 4, 5035  On the Modelling of the Transient Flow Behavior of Metallic Glasses: Analogy with Portevin-Le Chatelier Effect. 2016, 6, 48  Competing Indentation Deformation Mechanisms in Glass Using Different Strengthening Methods.	3 85 4
871 870 869 868	Properties of MgInta amorphous alloys. 2015, 96, 246-255  Statistical-mechanics based modeling of anisotropic viscoplastic deformation. 2015, 80, 37-51  Brittle to ductile transition in densified silica glass. 2014, 4, 5035  On the Modelling of the Transient Flow Behavior of Metallic Glasses: Analogy with Portevin-Le Chatelier Effect. 2016, 6, 48  Competing Indentation Deformation Mechanisms in Glass Using Different Strengthening Methods. 2016, 3,	3 85 4 16

864	Formation and dilatation of shear bands in a Cu-Zr metallic glass: A free volume perspective. <b>2016</b> , 120, 235101	14
863	The kinetic origin of delayed yielding in metallic glasses. <b>2016</b> , 108, 251901	7
862	Two distinct crystallization processes in supercooled liquid. <b>2016</b> , 144, 194505	5
861	Structure in sheared supercooled liquids: Dynamical rearrangements of an effective system of icosahedra. <b>2016</b> , 145, 234501	4
860	Facets of glass physics. <b>2016</b> , 69, 40-46	105
859	A small-gap effective-temperature model of transient shear band formation during flow. <b>2016</b> , 60, 873-882	12
858	Structural signature of a sheared granular flow. <b>2016</b> , 288, 55-64	4
857	Focus: Nucleation kinetics of shear bands in metallic glass. <b>2016</b> , 145, 211803	6
856	Universal structural parameter to quantitatively predict metallic glass properties. <b>2016</b> , 7, 13733	84
855	Chaotic state to self-organized critical state transition of serrated flow dynamics during brittle-to-ductile transition in metallic glass. <b>2016</b> , 119, 054902	14
854	Intrinsic correlation between Erelaxation and spatial heterogeneity in a metallic glass. 2016, 7, 11516	147
853	Sequential Nanopatterned Block Copolymer Self-Assembly on Surfaces. <b>2016</b> , 32, 5890-8	15
852	A Maxwell-extreme constitutive model of Zr-based bulk metallic glass in supercooled liquid region. <b>2016</b> , 103, 75-83	4
851	Nanoindentation of the Triclinic Molecular Crystal 1,3,5-Triamino-2,4,6-trinitrobenzene: A Molecular Dynamics Study. <b>2016</b> , 120, 8266-8277	19
850	Power-law scaling between mean stress drops and strain rates in bulk metallic glasses. <b>2016</b> , 99, 427-432	24
849	Universal scaling laws for homogeneous dislocation nucleation during nano-indentation. <b>2016</b> , 95, 742-754	9
848	Model for charge/discharge-rate-dependent plastic flow in amorphous battery materials. <b>2016</b> , 94, 167-180	13
847	Shock-induced time-dependent strength behavior in amorphous alloys from a microscopic view. <b>2016</b> , 120, 62-66	7

846	Structural Properties of Defects in Glassy Liquids. <b>2016</b> , 120, 6139-46		44
845	Self-organized Criticality Behavior in Bulk Metallic Glasses. <b>2016</b> , 23, 7-13		15
844	Robust structural identification via polyhedral template matching. <b>2016</b> , 24, 055007		308
843	Effects of atomic interaction stiffness on low-temperature relaxation of amorphous solids. <b>2016</b> , 18, 26643-26650		7
842	Visualization and Analysis Strategies for Atomistic Simulations. <b>2016</b> , 317-336		7
841	Localized plastic deformation in a model metallic glass: a survey of free volume and local force distributions. <b>2016</b> , 2016, 084006		13
840	Eshelby inclusions in granular matter: Theory and simulations. <i>Physical Review E</i> , <b>2016</b> , 94, 022907	2.4	7
839	Nonaffine rearrangements of atoms in deformed and quiescent binary glasses. <i>Physical Review E</i> , <b>2016</b> , 94, 023004	2.4	26
838	Polymer glass transition occurs at the marginal rigidity point with connectivity $z^* = 4$ . <b>2016</b> , 12, 7330-7		10
837	Direct visualization of free-volume-triggered activation of Irelaxation in colloidal glass. <i>Physical Review E</i> , <b>2016</b> , 94, 012606	2.4	3
836	Nonaffine displacements and the nonlinear response of a strained amorphous solid. <i>Physical Review E</i> , <b>2016</b> , 94, 022606	2.4	6
835	Notch Fracture Toughness of Glasses: Dependence on Rate, Age, and Geometry. <b>2016</b> , 6,		26
834	Structural evolution of nanoscale metallic glasses during high-pressure torsion: A molecular dynamics analysis. <b>2016</b> , 6, 36627		13
833	Mechanical behaviour of bio-inspired brittle-matrix nanocomposites under different strain rates using molecular dynamics. <b>2016</b> , 42, 1490-1501		5
832	Connecting Local Yield Stresses with Plastic Activity in Amorphous Solids. <b>2016</b> , 117, 045501		94
831	Local structural excitations in model glass systems under applied load. <b>2016</b> , 93,		21
830	Unveiling atomic-scale features of inherent heterogeneity in metallic glass by molecular dynamics simulations. <b>2016</b> , 93,		29
829	Nonlinear plastic modes in disordered solids. <i>Physical Review E</i> , <b>2016</b> , 93, 011001	2.4	39

828	Reversible plastic events during oscillatory deformation of amorphous solids. <i>Physical Review E</i> , <b>2016</b> , 93, 013001	1	48
827	Shearing a glass and the role of pinning delay in models of interface depinning. <i>Physical Review E</i> , <b>2016</b> , 93, 032610	1	9
826	Micromechanics of nonlinear plastic modes. <i>Physical Review E</i> , <b>2016</b> , 93, 053004	1	17
825	From depinning transition to plastic yielding of amorphous media: A soft-modes perspective.  Physical Review E, <b>2016</b> , 93, 063005	1	23
824	Structures of Local Rearrangements in Soft Colloidal Glasses. <b>2016</b> , 116, 238003		43
823	Finite-size effects in a model for plasticity of amorphous composites. <i>Physical Review E</i> , <b>2016</b> , 93, 02300 <b>4</b> .2	1	5
822	Mapping between atomistic simulations and Eshelby inclusions in the shear deformation of an amorphous silicon model. <i>Physical Review E</i> , <b>2016</b> , 93, 053002	1	40
821	Molecular Dynamic Simulation of Collision-Induced Third-Body Formation in Hydrogen-Free Diamond-Like Carbon Asperities. <b>2016</b> , 63, 26		11
820	Effects of Inertia on the Steady-Shear Rheology of Disordered Solids. <b>2016</b> , 116, 058303		25
819	Mean-Field Description of Plastic Flow in Amorphous Solids. <b>2016</b> , 6,		36
818	Thermomechanical processing of metallic glasses: extending the range of the glassy state. <b>2016</b> , 1,		157
817	Proposed correlation of structure network inherited from producing techniques and deformation behavior for Ni-Ti-Mo metallic glasses via atomistic simulations. <b>2016</b> , 6, 29722		11
816	Deformation behavior of metallic glasses with shear band like atomic structure: a molecular dynamics study. <b>2016</b> , 6, 30935		24
815	Colloidal crystals: Stresses come to light. <b>2016</b> , 15, 1151-1152		4
814	Plastic response and correlations in athermally sheared amorphous solids. <i>Physical Review E</i> , <b>2016</b> , 94, 032604	1	8
813	Structural Signature of Plasticity Unveiled by Nano-Scale Viscoelastic Contact in a Metallic Glass. <b>2016</b> , 6, 29357		18
812	Localized crystallization in shear bands of a metallic glass. <b>2016</b> , 6, 19358		18
811	Ab initio calculations of thermomechanical properties and electronic structure of vitreloy Zr41.2Ti13.8Cu12.5Ni10Be22.5. <b>2016</b> , 94,		12

# (2016-2016)

810	Nonaffine deformation under compression and decompression of a flow-stabilized solid. <b>2016</b> , 2016, 084003	О
809	Helical Flow and Transient Solute Dilution in Porous Media. <b>2016</b> , 111, 591-603	7
808	Crack initiation in metallic glasses under nanoindentation. <b>2016</b> , 115, 413-422	30
807	Serration Behavior in Zr-Cu-Al Glass-forming Systems. <b>2016</b> , 23, 42-47	11
806	Understanding the serrated flow and Johari-Goldstein relaxation of metallic glasses. <b>2016</b> , 444, 23-30	16
805	Discrete shear transformation zone plasticity. <b>2016</b> , 9, 21-29	7
804	Disorder, pre-stress and non-affinity in polymer 8-chain models. <b>2016</b> , 89, 110-125	9
803	Tailoring structural inhomogeneities in metallic glasses to enable tensile ductility at room temperature. <b>2016</b> , 19, 568-579	89
802	Theoretical and computational comparison of models for dislocation dissociation and stacking fault/core formation in fcc crystals. <b>2016</b> , 95, 719-741	32
801	Size distribution of shear transformation zones and their evolution towards the formation of shear bands in metallic glasses. <b>2016</b> , 445-446, 61-68	16
800	Direct visualization of free-volume-triggered activation of structural relaxation in colloidal glass. <b>2016</b> , 115, 104-107	1
799	Intrinsic structural defects on medium range in metallic glasses. <b>2016</b> , 75, 36-41	14
798	How the toughness in metallic glasses depends on topological and chemical heterogeneity. <b>2016</b> , 113, 7053-8	38
797	Spontaneous instabilities and stick-slip motion in a generalized HBraud-Lequeux model. <b>2016</b> , 12, 1230-7	6
796	Strengthening and toughening mechanisms of amorphous/amorphous nanolaminates. 2016, 80, 75-85	50
795	Metallic glass matrix composites. <b>2016</b> , 100, 1-69	341
794	Universality of slip avalanches in flowing granular matter. <b>2016</b> , 7, 10641	70
793	Sample size effects on strength and deformation mechanism of Sc75Fe25 nanoglass and metallic glass. <b>2016</b> , 116, 95-99	52

792	Simulation of mechanical performance limits and failure of carbon nanotube composites. <b>2016</b> , 24, 025012	10
791	Deformation of metallic glasses: Recent developments in theory, simulations, and experiments. <b>2016</b> , 109, 375-393	315
79°	Inelastic deformation of glassy polyaryleneetherketone: Energy accumulation and deformation mechanism. <b>2016</b> , 58, 18-32	5
789	Shear band relaxation in a deformed bulk metallic glass. <b>2016</b> , 109, 330-340	31
788	Effects of quenching rate on crack propagation in NiAl alloy using molecular dynamics. <b>2016</b> , 114, 13-17	3
787	Formation of chemical short range order and its influences on the dynamic/mechanical heterogeneity in amorphous ZrūuAg alloys: A molecular dynamics study. <b>2016</b> , 70, 61-67	21
786	Nature of crack-tip plastic zone in metallic glasses. <b>2016</b> , 77, 54-74	27
785	Nanoindentation investigation on the creep mechanism in metallic glassy films. <b>2016</b> , 651, 548-555	37
7 <sup>8</sup> 4	Multiple relaxation processes in Zr 44 Cu 40 Al 8 Ag 8 bulk metallic glass. <b>2016</b> , 651, 69-74	7
783	A <b>fi</b> gure of merit <b>If</b> or susceptibility of irradiated amorphous metal alloys to thermal spike-induced plasticity. <b>2016</b> , 102, 251-262	2
782	Particle jumps in structural glasses. <b>2016</b> , 12, 358-66	40
781	Plastic deformation induced anisotropy in metallic glasses: A molecular dynamics study. <b>2017</b> , 707, 102-107	7
7 <sup>8</sup> 0	Evolution of dislocation mechanisms in single-crystal Cu under shock loading in different directions. <b>2017</b> , 25, 025013	23
779	Dynamical theory of shear bands in structural glasses. <b>2017</b> , 114, 1287-1292	26
778	Simulating stick-slip failure in a sheared granular layer using a physics-based constitutive model. <b>2017</b> , 122, 295-307	13
777	Nanoindentation of ZrO2 and ZrO2/Zr systems by molecular dynamics simulation. <b>2017</b> , 486, 250-266	15
776	Deformation in amorphousdrystalline nanolaminates In effective-temperature theory and interaction between defects. <b>2017</b> , 25, 034002	3
775	Localization and instability in sheared granular materials: Role of friction and vibration. <i>Physical Review E</i> , <b>2017</b> , 95, 022901	6

774	Defect Engineering: A Path toward Exceeding Perfection. <b>2017</b> , 2, 663-669	14
773	Tracking particles with large displacements using energy minimization. <b>2017</b> , 13, 2201-2206	8
77 <sup>2</sup>	Effects of cooling rate on particle rearrangement statistics: Rapidly cooled glasses are more ductile and less reversible. <i>Physical Review E</i> , <b>2017</b> , 95, 022611	31
771	Shear Yielding and Shear Jamming of Dense Hard Sphere Glasses. <b>2017</b> , 118, 038001	57
770	Long-Lived Neighbors Determine the Rheological Response of Glasses. <b>2017</b> , 118, 018002	41
769	Serrated flow of CuZr-based bulk metallic glasses probed by nanoindentation: Role of the activation barrier, size and distribution of shear transformation zones. <b>2017</b> , 459, 130-141	45
768	Shear susceptibility IA universal integral parameter relating the shear softening, heat effects, anharmonicity of interatomic interaction and defectstructure of metallic glasses. <b>2017</b> , 87, 1-5	23
767	Slow creep in soft granular packings. <b>2017</b> , 13, 3411-3421	8
766	Effect of pre-existing shear bands on mechanical properties and serration behaviors in bulk metallic glasses. <b>2017</b> , 24, 402-410	2
765	Shear-induced reversibility of 2D colloidal suspensions in the presence of minimal thermal noise. <b>2017</b> , 13, 4278-4284	2
764	A microscopic continuum model for defect dynamics in metallic glasses. <b>2017</b> , 104, 1-11	4
763	Temperature dependent evolution of dynamic heterogeneity in metallic glass. <b>2017</b> , 121, 135104	8
762	Stable configurations of graphene on silicon. <b>2017</b> , 414, 25-33	7
761	Increasing fracture strength in bulk metallic glasses using ultrasonic nanocrystal surface modification. <b>2017</b> , 718, 246-253	14
760	Diffusive and martensitic nucleation kinetics in solid-solid transitions of colloidal crystals. 2017, 8, 14978	32
759	Computational modeling sheds light on structural evolution in metallic glasses and supercooled liquids. <b>2017</b> , 3,	51
758	Scaling description of non-local rheology. <b>2017</b> , 13, 3794-3801	4
757	Investigation on hardening behavior of metallic glass under cyclic indentation loading via molecular dynamics simulation. <b>2017</b> , 416, 14-23	27

756	Shock induced deformation response of single crystal copper: Effect of crystallographic orientation. <b>2017</b> , 135, 141-151	18
755	Study of the effects of grain size on the mechanical properties of nanocrystalline copper using molecular dynamics simulation with initial realistic samples. <b>2017</b> , 97, 2387-2405	14
754	Stable small bubble clusters in two-dimensional foams. <b>2017</b> , 13, 4370-4380	1
753	Energy landscape-driven non-equilibrium evolution of inherent structure in disordered material. <b>2017</b> , 8, 15417	57
75 <sup>2</sup>	Identification of interstitial-like defects in a computer model of glassy aluminum. 2017, 29, 305701	12
751	A molecular simulation study to the deformation Behaviors and the size effect of polyethylene during nanoindentation. <b>2017</b> , 137, 225-232	13
750	Stress-induced mechanical heterogeneity in metallic glasses revealed by spatial nano-indentation. <b>2017</b> , 471, 91-94	1
749	Plastic deformation behaviours of CuZr amorphous/crystalline nanolaminate: a molecular dynamics study. <b>2017</b> , 43, 1116-1124	12
748	Influence of nanoscale structural heterogeneity on shear banding in metallic glasses. 2017, 134, 104-115	27
747	The bouncing threshold in silica nanograin collisions. <b>2017</b> , 19, 16555-16562	15
746	In-situ atomic force microscopy observation revealing gel-like plasticity on a metallic glass surface. <b>2017</b> , 121, 095304	11
745	Plurality of inherent states in equiatomic solid solutions. <b>2017</b> , 95,	
744	The critical strain - A crossover from stochastic activation to percolation of flow units during stress relaxation in metallic glass. <b>2017</b> , 134, 75-79	10
743	The impact of sedimentary anisotropy on solute mixing in stacked scour-pool structures. <b>2017</b> , 53, 2813-2832	8
742	Thermokinematic memory and the thixotropic elasto-viscoplasticity of waxy crude oils. 2017, 61, 427-454	58
741	Entanglements in Glassy Polymer Crazing: Cross-Links or Tubes?. <b>2017</b> , 50, 459-471	25
740	Plastic deformation mechanisms and size effect of Cu50Zr50/Cu amorphous/crystalline nanolaminate: A molecular dynamics study. <b>2017</b> , 129, 137-146	26
739	Amorphization-assisted nanoscale wear during the running-in process. <b>2017</b> , 370-371, 46-50	15

738	Morphology and mechanical properties of nanocrystalline Cu/Ag alloy. 2017, 52, 4555-4567	22
737	Correlation between initial structure and athermal quasi-static compressive deformation in a metallic glass. <b>2017</b> , 699, 274-277	7
736	Free volume: An indicator of the glass-forming ability in binary alloys. <b>2017</b> , 7, 105101	6
735	Formation of a phosphate conversion coating on bioresorbable Mg-based metallic glasses and its effect on corrosion performance. <b>2017</b> , 129, 214-225	26
734	Determining Quiescent Colloidal Suspension Viscosities Using the Green-Kubo Relation and Image-Based Stress Measurements. <b>2017</b> , 119, 138001	6
733	Shocking of metallic glass to induce microstructure heterogeneity: A molecular dynamics study. <b>2017</b> , 122, 095102	7
73 <sup>2</sup>	Topological structure and mechanics of glassy polymer networks. <b>2017</b> , 13, 8392-8401	6
731	Effect of surface and internal defects on the mechanical properties of metallic glasses. <b>2017</b> , 7, 13472	4
730	Different universality classes at the yielding transition of amorphous systems. <i>Physical Review E</i> , <b>2017</b> , 96, 023006	11
729	Yield stress materials in soft condensed matter. <b>2017</b> , 89,	343
729 728	Yield stress materials in soft condensed matter. <b>2017</b> , 89,  Nonlinear softening of unconsolidated granular earth materials. <b>2017</b> , 122, 6998-7008	343
728	Nonlinear softening of unconsolidated granular earth materials. <b>2017</b> , 122, 6998-7008	2
728 727	Nonlinear softening of unconsolidated granular earth materials. <b>2017</b> , 122, 6998-7008  Effect of nematic ordering on the elasticity and yielding in disordered polymeric solids. <b>2017</b> , 55, 1760-1769  Lattice instability during phase transformations under multiaxial stress: Modified transformation	2
728 727 726	Nonlinear softening of unconsolidated granular earth materials. 2017, 122, 6998-7008  Effect of nematic ordering on the elasticity and yielding in disordered polymeric solids. 2017, 55, 1760-1769  Lattice instability during phase transformations under multiaxial stress: Modified transformation work criterion. 2017, 96,  On the origin of heat effects and shear modulus changes upon structural relaxation and	2 4 34
728 727 726 725	Nonlinear softening of unconsolidated granular earth materials. 2017, 122, 6998-7008  Effect of nematic ordering on the elasticity and yielding in disordered polymeric solids. 2017, 55, 1760-1769  Lattice instability during phase transformations under multiaxial stress: Modified transformation work criterion. 2017, 96,  On the origin of heat effects and shear modulus changes upon structural relaxation and crystallization of metallic glasses. 2017, 475, 48-52	2 4 34
728 727 726 725 724	Nonlinear softening of unconsolidated granular earth materials. 2017, 122, 6998-7008  Effect of nematic ordering on the elasticity and yielding in disordered polymeric solids. 2017, 55, 1760-1769  Lattice instability during phase transformations under multiaxial stress: Modified transformation work criterion. 2017, 96,  On the origin of heat effects and shear modulus changes upon structural relaxation and crystallization of metallic glasses. 2017, 475, 48-52  Design of fracture-resistant silicon structure with molecular dynamics simulation. 2017, 139, 379-386	2 4 34 12

720	Slower icosahedral cluster rejuvenation drives the brittle-to-ductile transition in nanoscale metallic glasses. <b>2017</b> , 140, 235-243		13
719	Effect of the strain rate on the intermediate temperature brittleness in Zr-based bulk metallic glasses. <b>2017</b> , 475, 172-178		9
718	Interface-controlled creep in metallic glass composites. <b>2017</b> , 141, 251-260		15
717	Slow Dynamics and Strength Recovery in Unconsolidated Granular Earth Materials: A Mechanistic Theory. <b>2017</b> , 122, 7573-7583		7
716	The stochastic transition from size dependent to size independent yield strength in metallic glasses. <b>2017</b> , 109, 200-216		19
715	Strain gradient drives shear banding in metallic glasses. <b>2017</b> , 96,		13
714	Universal scaling of the stress-strain curve in amorphous solids. <i>Physical Review E</i> , <b>2017</b> , 96, 033002	2.4	5
713	Equilibrium and dynamic pleating of a crystalline bonded network. <b>2017</b> , 146, 124501		9
712	Strain-dependent activation energy of shear transformation in metallic glasses. 2017, 95,		12
711	Molecular insight into the Mullins effect: irreversible disentanglement of polymer chains revealed by molecular dynamics simulations. <b>2017</b> , 19, 19468-19477		19
710	Lithiation-Assisted Strengthening Effect and Reactive Flow in Bulk and Nanoconfined Sulfur Cathodes of LithiumBulfur Batteries. <b>2017</b> , 121, 17029-17037		7
709	Stability of shear banding process in bulk metallic glasses and composites. <b>2017</b> , 32, 2560-2569		8
708	Linking initial microstructure and local response during quasistatic granular compaction. <i>Physical Review E</i> , <b>2017</b> , 96, 012905	2.4	13
707	Fluidization and wall slip of soft glassy materials by controlled surface roughness. <i>Physical Review E</i> , <b>2017</b> , 95, 052602	2.4	12
706	Shear transformation distribution and activation in glasses at the atomic scale. <i>Physical Review E</i> , <b>2017</b> , 95, 033005	2.4	24
705	Direct Observation of Percolation in the Yielding Transition of Colloidal Glasses. <b>2017</b> , 118, 148001		31
704	DuctilelFracture of Metallic Glass Nanolaminates. 2017, 4, 1700510		16
703	Excess vibrational modes of a crystal in an external non-affine field. <b>2017</b> , 129, 891-897		9

702	Reinforcement of nanoglasses by interface strengthening. <b>2017</b> , 141, 115-119	15
701	One- and two-component colloidal glasses under transient shear. <b>2017</b> , 226, 3023-3037	6
700	Onset of shear thinning in glassy liquids: Shear-induced small reduction of effective density.  Physical Review E, 2017, 95, 012613  2.4	8
699	Coarse graining atomistic simulations of plastically deforming amorphous solids. <i>Physical Review E</i> , <b>2017</b> , 95, 053001	26
698	Understanding the mechanisms of amorphous creep through molecular simulation. <b>2017</b> , 114, 13631-13636	43
697	Malleability at the extreme nanoscale: Slow and fast quakes of few-body systems. <b>2017</b> , 96,	
696	Aging and linear response in the HBraudDequeux model for amorphous rheology. <b>2017</b> , 50, 165002	3
695	Structure-property relationships from universal signatures of plasticity in disordered solids. <b>2017</b> , 358, 1033-1037	144
694	Thermodynamic theory of dislocation-enabled plasticity. <i>Physical Review E</i> , <b>2017</b> , 96, 053005 2.4	16
693	Correlation between Local Structure Order and Spatial Heterogeneity in a Metallic Glass. <b>2017</b> , 119, 215501	77
692	Collision-Induced Melting in Collisions of Water Ice Nanograins: Strong Deformations and Prevention of Bouncing. <b>2017</b> , 44, 10,822	8
691	A hidden veriable in characteristics zone volume versus Beissenflication relation in motallic	
	A hidden variable in shear transformation zone volume versus Poisson ratio relation in metallic glasses. <b>2017</b> , 5, 106105	5
690		5
690 689	glasses. <b>2017</b> , 5, 106105	
	glasses. 2017, 5, 106105  Absence of Marginal Stability in a Structural Glass. 2017, 119, 205501	48
689	Absence of Marginal Stability in a Structural Glass. 2017, 119, 205501  Shock-induced compaction of nanoparticle layers into nanostructured coating. 2017, 122, 165901  Local and global avalanches in a two-dimensional sheared granular medium. <i>Physical Review E</i> , 2017	48
689	Absence of Marginal Stability in a Structural Glass. 2017, 119, 205501  Shock-induced compaction of nanoparticle layers into nanostructured coating. 2017, 122, 165901  Local and global avalanches in a two-dimensional sheared granular medium. Physical Review E, 2017, 96, 052902	48 11 45

684	Universal features of amorphous plasticity. <b>2017</b> , 8, 15928		42
683	Thermal processing and enthalpy storage of a binary amorphous solid: A molecular dynamics study. <b>2017</b> , 32, 2668-2679		21
682	Local thermal energy as a structural indicator in glasses. <b>2017</b> , 114, 7289-7294		55
681	Effect of composition and pressure on the shear strength of sodium silicate glasses: An atomic scale simulation study. <i>Physical Review E</i> , <b>2017</b> , 95, 043001	2.4	16
68o	Tunable elastic heterogeneity caused by deformation-induced magnetization in flexible metallic glass. <b>2017</b> , 130, 7-11		5
679	Mechanical Deformation in Metallic Liquids and Glasses: From Atomic Bond-Breaking to Avalanches. <b>2017</b> , 199-225		O
678	The Irreversibility Transition in Amorphous Solids Under Periodic Shear. <b>2017</b> , 227-259		3
677	Shear band dilatation in amorphous alloys. <b>2017</b> , 127, 54-57		18
676	Nano-scale elasticplastic properties and indentation-induced deformation of amorphous silicon carbide thin film. <b>2017</b> , 43, 385-391		18
675	Damage spreading in quasi-brittle disordered solids: I. Localization and failure. <b>2017</b> , 102, 101-124		8
674	Cooling-rate induced softening in a colloidal glass. <b>2017</b> , 7, 16882		2
673	Emergence of Long-Ranged Stress Correlations at the Liquid to Glass Transition. <b>2017</b> , 119, 265701		24
672	Thermalized formulation of soft glassy rheology. <i>Physical Review E</i> , <b>2017</b> , 96, 063001	2.4	1
671	A molecular dynamics study on atomistic mechanisms of nano-scale cutting process of sapphire. <b>2017</b> , 31, 4353-4362		11
670	Particle rearrangement and softening contributions to the nonlinear mechanical response of glasses. <i>Physical Review E</i> , <b>2017</b> , 96, 032602	2.4	9
669	Molecular dynamics simulations of GaAs-crystal surface modifications during nanoindentation with AFM tip <b>2017</b> , 917, 092018		
668	Partial jamming and non-locality in dense granular flows. <b>2017</b> , 140, 03060		2
667	The Development of Structure Model in Metallic Glasses. <b>2017</b> , 20, 326-338		8

666	Local yield stress statistics in model amorphous solids. <i>Physical Review E</i> , <b>2018</b> , 97, 033001 2.4	38
665	Nanomechanics of slip avalanches in amorphous plasticity. <b>2018</b> , 114, 158-171	29
664	Strain heterogeneity in sheared colloids revealed by neutron scattering. <b>2018</b> , 20, 6050-6054	
663	Elastic modulus and yield strength of semicrystalline polymers with bond disorder are higher than in atomic crystals. <b>2018</b> , 118, 40-46	1
662	On the existence of thermodynamically stable rigid solids. <b>2018</b> , 115, E4322-E4329	16
661	Yielding of a model glass former: An interpretation with an effective system of icosahedra. <i>Physical Review E</i> , <b>2018</b> , 97, 032609	1
660	Shock response of nanoporous magnesium by molecular dynamics simulations. <b>2018</b> , 141, 143-156	29
659	Radiation-induced extreme elastic and inelastic interactions in concentrated solid solutions. <b>2018</b> , 150, 1-8	11
658	Dilatancy induced ductile-brittle transition of shear band in metallic glasses. <b>2018</b> , 474, 20170836	16
657	The anomalous yield behavior of fused silica glass. <b>2018</b> , 113, 105-125	13
656	Anisotropic particles strengthen granular pillars under compression. <i>Physical Review E</i> , <b>2018</b> , 97, 012904 <sub>2.4</sub>	8
655	Structural evolution in a metallic glass pillar upon compression. <b>2018</b> , 721, 8-13	2
654	Simulations of surface stress effects in nanoscale single crystals. <b>2018</b> , 26, 035006	2
653	Contact mechanics of graphene-covered metal surfaces. <b>2018</b> , 112, 061601	13
652	Dilatancy of Shear Transformations in a Colloidal Glass. <b>2018</b> , 9,	12
651	Microstructure formation of metallic nanoglasses: Insights from molecular dynamics simulations. <b>2018</b> , 145, 322-330	31
650	Localized atomic segregation in the spalled area of a Zr50Cu40Al10 bulk metallic glasses induced	
	by laser-shock experiment. <b>2018</b> , 51, 065304	7

648	Rate Dependence of Elementary Rearrangements and Spatiotemporal Correlations in the 3D Flow of Soft Solids. <b>2018</b> , 120, 018001	22
647	The yielding transition in periodically sheared binary glasses at finite temperature. <b>2018</b> , 150, 162-168	27
646	Metastability at the Yield-Stress Transition in Soft Glasses. <b>2018</b> , 8,	11
645	Characterizing single isolated radiation-damage events from molecular dynamics via virtual diffraction methods. <b>2018</b> , 123, 165902	11
644	Small nanoparticles, surface geometry and contact forces. <b>2018</b> , 474, 20170723	6
643	Adaptive Monte Carlo analysis for strongly nonlinear stochastic systems. <b>2018</b> , 175, 207-224	15
642	Quantitative light microscopy of dense suspensions: Colloid science at the next decimal place. <b>2018</b> , 34, 32-46	8
641	Entropy and temperature of microstructure in crystal plasticity. <b>2018</b> , 128, 24-30	9
640	Uncertainty quantification for complex systems with very high dimensional response using Grassmann manifold variations. <b>2018</b> , 364, 393-415	6
639	Predicting Shear Transformation Events in Metallic Glasses. <b>2018</b> , 120, 125503	34
638	Atomic-scale simulation of structure and mechanical properties of Cu1⊠Agx Ni multilayer systems. <b>2018</b> , 150, 236-247	13
637	Influence of Grain Boundary Complexion on Deformation Mechanism of High Temperature Bending Creep Process of Cu Bicrystal. <b>2018</b> , 71, 1721-1734	12
636	Microscopic dynamics and failure precursors of a gel under mechanical load. 2018, 115, 3587-3592	37
635	The generation of piezoelectricity and flexoelectricity in graphene by breaking the materials symmetries. <b>2018</b> , 29, 225702	35
635 634		35 5
	symmetries. <b>2018</b> , 29, 225702	
634	Plasticity Mechanism for Glassy Polymers: Computer Simulation Picture. <b>2018</b> , 60, 1-49	5

# (2018-2018)

630	Thermally-activated stress relaxation in a model amorphous solid and the formation of a system-spanning shear event. <b>2018</b> , 143, 205-213		21
629	Extraordinary creep relaxation time in a La-based metallic glass. <b>2018</b> , 53, 2956-2964		10
628	Prediction of fracture loci for Cu47.5Zr47.5Al5. <b>2018</b> , 96, 795-802		1
627	Translationally invariant colloidal crystal templates. <b>2017</b> , 14, 104-111		6
626	Cavitation in epoxies under composite-like stress states. <b>2018</b> , 106, 52-58		13
625	Local structure evolutions of metallic glasses during shear deformation investigated by computer simulations. <b>2018</b> , 735, 1023-1030		6
624	Complex Dynamical Behavior in the Shear-Displacement Model for Bulk Metallic Glasses during Plastic Deformation. <b>2018</b> , 2018, 1-13		3
623	Plastic deformation of a permanently bonded network: Stress relaxation by pleats. <b>2018</b> , 149, 184503		6
622	Mechanical properties and thermal stability of (NbTiAlSiZr)Nx high-entropy ceramic films at high temperatures. <b>2018</b> , 33, 3347-3354		19
621	Long-range strain correlations in 3D quiescent glass forming liquids. <b>2018</b> , 124, 18003		9
620	Combining Machine Learning and Physics to Understand Glassy Systems. <b>2018</b> , 1036, 012021		6
619	Deformation and flow of amorphous solids: Insights from elastoplastic models. <b>2018</b> , 90,		166
618	Simple theory of viscosity in liquids. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	8
617	A stability-reversibility map unifies elasticity, plasticity, yielding, and jamming in hard sphere glasses. <b>2018</b> , 4, eaat6387		50
616	Atomic imprinting into metallic glasses. <b>2018</b> , 1,		19
615	Irreversible transition of amorphous and polycrystalline colloidal solids under cyclic deformation. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	4
614	Shear band broadening in simulated glasses. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	12
613	Energy Fluctuations in Slowly Sheared Granular Materials. <b>2018</b> , 121, 248001		13

612	Spatial heterogeneity as the structure feature for structure-property relationship of metallic glasses. <b>2018</b> , 9, 3965	65
611	Mechanical avalanches promoted by magnetoelastic coupling in magnetic metallic glasses. <b>2018</b> , 30, 465803	1
610	Diffusion in Mesoscopic Lattice Models of Amorphous Plasticity. <b>2018</b> , 121, 145501	8
609	Metallic Glass Matrix Composites. 2018,	
608	Atomistic origin of stress overshoots and serrations in a CuZr metallic glass. <b>2018</b> , 1, 121-127	8
607	Power law viscoelasticity of a fractal colloidal gel. <b>2018</b> , 62, 1429-1441	31
606	Non-affine deformation of free volume during strain dependent diffusion in polymer thin films. <b>2018</b> , 155, 177-186	5
605	Probe Embryonic Damage Evolution in Bulk Metallic Glasses under Plate-impact Loading. <b>2018</b> , 183, 03013	1
604	Microscopic Theory of Two-Step Yielding in Attractive Colloids. 2018, 121, 185503	17
603	Interface-Related Shear Banding Deformation of Amorphous/Crystalline CuZr/Cu Nanolaminates by Molecular Dynamics Simulations. <b>2018</b> , 59, 230-236	1
602	Elastoplastic description of sudden failure in athermal amorphous materials during quasistatic loading. <i>Physical Review E</i> , <b>2018</b> , 98,	39
601	Mechanical properties of hardBoft block copolymers calculated from coarse-grained molecular dynamics models. <b>2018</b> , 56, 1552-1566	5
600	Correlating defects density in metallic glasses with the distribution of inherent structures in potential energy landscape. <b>2018</b> , 161, 295-301	19
599	Shearing small glass-forming systems: A potential energy landscape perspective. <i>Physical Review E</i> , <b>2.4</b>	11
598	Graphene/hexagonal boron nitride heterostructures: Mechanical properties and fracture behavior from nanoindentation simulations. <b>2018</b> , 113, 121902	11
597	Influence of dislocations, twins, and stacking faults on the fracture behavior of nanocrystalline Ni nanowire under constant bending load: a molecular dynamics study. <b>2018</b> , 24, 277	11
596	Strain localization in dry sheared granular materials: A compactivity-based approach. <i>Physical Review E</i> , <b>2018</b> , 98, 022906	10
595	Predictions for circular contraction-expansion flows with viscoelastoplastic & thixotropic fluids. <b>2018</b> , 261, 188-210	4

594	Nanocompression of secondary particles of silica aerogel. <b>2018</b> , 157, 157-161		12
593	Strengthening mechanisms in nanoporous metallic glasses. <b>2018</b> , 155, 151-158		25
592	Unusual vortex-like atomic motion observed for viscoelasticity in metallic glass. 2018, 155, 104-111		5
591	Elastic Fluctuations and Structural Heterogeneities in Metallic Glasses. <b>2018</b> , 28, 1800388		32
590	Microscopic Origins of Shear Jamming for 2D Frictional Grains. <b>2018</b> , 120, 208004		33
589	Dynamical mechanical analysis of metallic glass with and without miscibility gap. <b>2018</b> , 730, 155-161		2
588	Effect of the Ratio lK/p on Glassy-Polymeric Shear Deformation Mechanisms. <b>2018</b> , 51, 4370-4380		5
587	Gaining sight after being blind: A tribute to Jing Zhu. <b>2018</b> , 192, 37-49		4
586	Atomistic simulations of the strengthening effect of high-density bubble formation in helium irradiated single crystalline copper. <b>2018</b> , 1, 139-149		7
585	Orientation of plastic rearrangements in two-dimensional model glasses under shear. <i>Physical Review E</i> , <b>2018</b> , 97, 063002	2.4	8
585 584		2.4	22
	Review E, 2018, 97, 063002  From metallic glasses to nanocrystals: Molecular dynamics simulations on the crossover from	2.4	
584	From metallic glasses to nanocrystals: Molecular dynamics simulations on the crossover from glass-like to grain-boundary-mediated deformation behaviour. <b>2018</b> , 156, 205-214	2.4	22
584 583	Review E, 2018, 97, 063002  From metallic glasses to nanocrystals: Molecular dynamics simulations on the crossover from glass-like to grain-boundary-mediated deformation behaviour. 2018, 156, 205-214  Strain rate and temperature effect on Zr50Cu50 metallic glass under pure shear. 2018, 1043, 012040  Fluid Phase Coexistence in Biological Membrane: Insights from Local Nonaffine Deformation of	2.4	22
584 583 582	From metallic glasses to nanocrystals: Molecular dynamics simulations on the crossover from glass-like to grain-boundary-mediated deformation behaviour. 2018, 156, 205-214  Strain rate and temperature effect on Zr50Cu50 metallic glass under pure shear. 2018, 1043, 012040  Fluid Phase Coexistence in Biological Membrane: Insights from Local Nonaffine Deformation of Lipids. 2018, 115, 117-128	2.4	22 1 10
584 583 582 581	Review E, 2018, 97, 063002  From metallic glasses to nanocrystals: Molecular dynamics simulations on the crossover from glass-like to grain-boundary-mediated deformation behaviour. 2018, 156, 205-214  Strain rate and temperature effect on Zr50Cu50 metallic glass under pure shear. 2018, 1043, 012040  Fluid Phase Coexistence in Biological Membrane: Insights from Local Nonaffine Deformation of Lipids. 2018, 115, 117-128  Fatigue and fracture behavior of bulk metallic glasses and their composites. 2018, 98, 168-248  Nanometer-scale gradient atomic packing structure surrounding soft spots in metallic glasses. 2018	2.4	22 1 10 52
584 583 582 581 580	From metallic glasses to nanocrystals: Molecular dynamics simulations on the crossover from glass-like to grain-boundary-mediated deformation behaviour. 2018, 156, 205-214  Strain rate and temperature effect on Zr50Cu50 metallic glass under pure shear. 2018, 1043, 012040  Fluid Phase Coexistence in Biological Membrane: Insights from Local Nonaffine Deformation of Lipids. 2018, 115, 117-128  Fatigue and fracture behavior of bulk metallic glasses and their composites. 2018, 98, 168-248  Nanometer-scale gradient atomic packing structure surrounding soft spots in metallic glasses. 2018, 4,	2.4	22 1 10 52 24

576	Slow relaxation dynamics in binary glasses during stress-controlled, tension-compression cyclic loading. <b>2018</b> , 153, 235-240	25
575	Relationship between the heat effects and shear modulus changes occurring upon heating of a metallic glass into the supercooled liquid state. <b>2018</b> , 500, 129-132	4
574	Critical exponents of the yielding transition of amorphous solids. <i>Physical Review E</i> , <b>2018</b> , 98, 013002 2.4	14
573	Role of atomic-scale chemical heterogeneities in improving the plasticity of Cu-Zr-Ag bulk amorphous alloys. <b>2018</b> , 157, 209-217	16
572	Local volume as a robust structural measure and its connection to icosahedral content in a model binary amorphous system. <b>2018</b> , 3, 97-106	6
571	Mechanical glass transition revealed by the fracture toughness of metallic glasses. <b>2018</b> , 9, 3271	76
570	Unveiling the nanoscale heterogeneity controlled deformation of thermosets. 2018, 121, 432-446	12
569	Study of Glass Forming on Cu60.0Zr32.5Ti7.5 Alloy by Molecular Dynamics Simulation. <b>2018</b> , 21,	1
568	Density fluctuations with fractal order in metallic glasses detected by synchrotron X-ray nano-computed tomography. <b>2018</b> , 155, 69-79	16
567	A characteristic energy scale in glasses. <b>2018</b> , 148, 214502	48
566	A multiscale shear-transformation-zone (STZ) model and simulation of plasticity in amorphous solids. <b>2018</b> , 155, 153-165	16
565	Random critical point separates brittle and ductile yielding transitions in amorphous materials. <b>2018</b> , 115, 6656-6661	130
564	Size-dependent mechanical responses of metallic glasses. <b>2019</b> , 64, 163-180	20
	Size-dependent mechanicat responses of metatic glasses. 2019, 64, 163-160	
563	Boftnesslas the structural origin of plasticity in disordered solids: a quantitative insight from machine learning. <b>2019</b> , 62, 154-160	10
563 562	Boftness[as the structural origin of plasticity in disordered solids: a quantitative insight from	
	Boftnesslas the structural origin of plasticity in disordered solids: a quantitative insight from machine learning. <b>2019</b> , 62, 154-160	10
562	Boftnesslas the structural origin of plasticity in disordered solids: a quantitative insight from machine learning. <b>2019</b> , 62, 154-160  Flow units as dynamic defects in metallic glassy materials. <b>2019</b> , 6, 304-323	10

558	Mechanism of Chip Segmentation in Orthogonal Cutting of Zr-Based Bulk Metallic Glass. 2019, 141,		8
557	Molecular dynamics simulation of phase transformation of fused silica under nanoparticle impact: The influence of temperature and impact velocity. <b>2019</b> , 170, 109169		2
556	Connection between the anisotropic structure and nonlinear rheology of sheared colloidal suspensions investigated by Brownian dynamics simulations. <b>2019</b> , 3, 055018	,	3
555	Chemical and physical origins of friction on surfaces with atomic steps. <b>2019</b> , 5, eaaw0513		32
554	Effect of Liquid State Organization on Nanostructure and Strength of Model Multicomponent Solids. <b>2019</b> , 123, 035502		4
553	On the role of Cu-Zr amorphous intergranular films on crack growth retardation in nanocrystalline Cu during monotonic and cyclic loading conditions. <b>2019</b> , 169, 109122	:	9
552	Silica Glass Toughened by Consolidation of Glassy Nanoparticles. <b>2019</b> , 19, 5222-5228		16
551	Elastic interphase properties of nanoparticle/epoxy nanocomposites: A molecular dynamics study. <b>2019</b> , 176, 107211		20
550	Correlations of non-affine displacements in metallic glasses through the yield transition. <b>2019</b> , 2, 045006	,	5
549	Classical nucleation theory for the crystallization kinetics in sheared liquids. <i>Physical Review E</i> , <b>2019</b> , 99, 062801	,	6
548	Basal dislocation/precipitate interactions in MgAl alloys: an atomistic investigation. <b>2019</b> , 27, 075003		13
547	Emergence and percolation of rigid domains during the colloidal glass transition. <i>Physical Review E</i> , <b>2019</b> , 99, 062610		10
546	Atomistic simulations of shock compression of single crystal and core-shell Cu@Ni nanoporous metals. <b>2019</b> , 126, 015901		15
545	Improvement of intrinsic plasticity and strength of Zr55Cu30Ni5Al10 metallic glass by tuning the glass transition temperature. <b>2019</b> , 762, 138102		4
544	Gradient structure regulated plastic deformation mechanisms in polycrystalline nanotwinned copper. <b>2019</b> , 52, 365304		4
543	Flow dynamics of concentrated starlike micelles: A superposition rheometry investigation into relaxation mechanisms. <b>2019</b> , 63, 641-653		6
542	Avalanches, thresholds, and diffusion in mesoscale amorphous plasticity. <i>Physical Review E</i> , <b>2019</b> , 100, 043003		11
541	Effect of Pinning on the Yielding Transition of Amorphous Solids. <b>2019</b> , 123, 185501		3

540	Probing the Degree of Heterogeneity within a Shear Band of a Model Glass. <b>2019</b> , 123, 195502	19
539	Intensification of shock damage through heterogeneous phase transition and dislocation loop formation due to presence of pre-existing line defects in single crystal Cu. <b>2019</b> , 126, 174302	3
538	Nanoscale indentation and scratching tests of single crystal sapphire using molecular dynamics simulation. <b>2019</b> , 170, 109195	3
537	Highly ductile amorphous oxide at room temperature and high strain rate. <b>2019</b> , 366, 864-869	58
536	Change of crackling noise in granite by thermal damage: Monitoring nuclear waste deposits. <b>2019</b> , 104, 1578-1584	10
535	Granular scale responses in the shear band region. <b>2019</b> , 21, 1	9
534	Intrinsic dissipation mechanisms in metallic glass resonators. <b>2019</b> , 151, 144506	3
533	Activation volume details from nonlinear anelastic deformation of a metallic glass. <b>2019</b> , 126, 185104	2
532	Accelerated relaxation in disordered solids under cyclic loading with alternating shear orientation. <b>2019</b> , 525, 119683	13
531	The Imprint of Vegetation on Desert Dune Dynamics. <b>2019</b> , 46, 12041-12048	11
530	Hydrostatic pressure effect on metallic glasses: A theoretical prediction. <b>2019</b> , 126, 145901	5
529	Structural relaxation affecting shear-transformation avalanches in metallic glasses. <i>Physical Review E</i> , <b>2019</b> , 100, 043002	4
528	Contact Mechanics for Solids with Randomly Rough Surfaces and Plasticity. 2019, 7, 90	4
527	Networks and Hierarchies: How Amorphous Materials Learn to Remember. <b>2019</b> , 123, 178002	23
526	Force transmission and anisotropic characteristics of sheared granular materials with rolling resistance. <b>2019</b> , 21, 1	7
525	Restriction of grain growth of nano-crystalline Ni-Zr alloy by Zr atoms segregated at grain boundary under high temperature intermittent stressing. <b>2019</b> , 45, 1465-1479	
524	Overdamped langevin dynamics simulations of grain boundary motion. <b>2019</b> , 3,	8
523	Study of the sensitivity of the mode I/III notch toughness of Zr41.2Ti13.8Cu10Ni12.5Be22.5 metallic glass to the loading rate under impact loading. <b>2019</b> , 6, 105205	O

522	Shear transformation zone analysis of anelastic relaxation of a metallic glass reveals distinct properties of and Irelaxations. <i>Physical Review E</i> , <b>2019</b> , 100, 033001	7
521	Slow Coarsening in Jammed Athermal Soft Particle Suspensions. <b>2019</b> , 123, 108001	5
520	Stucture and size of the plastic zone formed during nanoindentation of a metallic glass. <b>2019</b> , 523, 119593	8
519	Exploring the link between crystal defects and nonaffine displacement fluctuations. <i>Physical Review E</i> , <b>2019</b> , 100, 033002	4
518	Research on mechanism of nanoscale cutting with arc trajectory for monocrystalline silicon based on molecular dynamics simulation. <b>2019</b> , 170, 109175	10
5 <sup>1</sup> 7	Influence of specimen size and strain rate on tensile deformation and fracture behavior of single-layer Silicene. <b>2019</b> , 18, 1401-1410	
516	Effect of Ambient Chemistry on Friction at the Basal Plane of Graphite. <b>2019</b> , 11, 40800-40807	4
515	Temperature effects on the nanoindentation characterization of stiffness gradients in confined polymers. <b>2019</b> , 15, 359-370	7
514	Revisiting the structureproperty relationship of metallic glasses: Common spatial correlation revealed as a hidden rule. <b>2019</b> , 99,	23
513	Scratching Cu Au Nanolaminates. <b>2019</b> , 7, 44	2
512	Multiscale poromechanics of wet cement paste. <b>2019</b> , 116, 10652-10657	21
511	Nanoscratching of metallic glasses [An atomistic study. <b>2019</b> , 139, 1-11	28
510	Dynamic relaxations and relaxation-property relationships in metallic glasses. <b>2019</b> , 106, 100561	131
509	On the Relationship between the Properties of Metallic Glasses and Their Maternal Crystals. <b>2019</b> , 61, 962-968	2
508	Interstitial clustering in metallic systems as a source for the formation of the icosahedral matrix and defects in the glassy state. <b>2019</b> , 31, 385703	5
507	Aging and rejuvenation during elastostatic loading of amorphous alloys: A molecular dynamics simulation study. <b>2019</b> , 168, 125-130	18
506	Metallic Glasses: A New Approach to the Understanding of the Defect Structure and Physical Properties. <b>2019</b> , 9, 605	26
505	Heterogeneous structural changes correlated to local atomic order in thermal rejuvenation process of Cu-Zr metallic glass. <b>2019</b> , 20, 632-642	20

504	Structural origin for vibration-induced accelerated aging and rejuvenation in metallic glasses. <b>2019</b> , 150, 204507	11
503	A linear relationship between free volume and annealing temperature in ZrCu metallic glass. <b>2019</b> , 6, 085213	1
502	Anisotropic structural predictor in glassy materials. <i>Physical Review E</i> , <b>2019</b> , 99, 060601 2.4	16
501	Rheological Properties of Liquids Under Conditions of Elastohydrodynamic Lubrication. <b>2019</b> , 67, 1	21
500	Ice Nucleation of Confined Monolayer Water Conforms to Classical Nucleation Theory. <b>2019</b> , 10, 3115-3121	7
499	Plastic Properties of a Metallic Iron Glass Model under Uniaxial Tension. <b>2019</b> , 120, 95-100	2
498	Identifying structural signatures of shear banding in model polymer nanopillars. <b>2019</b> , 15, 4548-4561	14
497	Smoothed particle hydrodynamics simulation of granular system under cyclic compressions. <b>2019</b> , 353, 84-97	2
496	Revealing the atomistic nature of dislocation-precipitate interactions in Al-Cu alloys. 2019, 797, 325-333	15
495	Probing the local response of a two-dimensional liquid foam. <b>2019</b> , 92, 1	2
494	Bond-breaking analyses on the characteristics of flow defects in metallic glasses under plastic deformation. <b>2019</b> , 799, 450-461	6
493	Shear-Transformation Zone Activation during Loading and Unloading in Nanoindentation of Metallic Glasses. <b>2019</b> , 12,	19
492	A review of thixotropy and its rheological modeling. <b>2019</b> , 63, 477-501	91
491	Potential energy states and mechanical properties of thermally cycled binary glasses. <b>2019</b> , 34, 2664-2671	13
490	Structural origins for the generation of strength, ductility and toughness in bulk-metallic glasses using hydrogen microalloying. <b>2019</b> , 171, 216-230	25
489	Structural heterogeneities and mechanical behavior of amorphous alloys. <b>2019</b> , 104, 250-329	248
488	Strain Localization Above the Yielding Point in Cyclically Deformed Glasses. 2019, 9,	20
487	Dynamic Probing of Structural Evolution of Single Crystal Fe during Rolling Process Using Atomistic Simulation. <b>2019</b> , 90, 1800636	11

486	Modulating heterogeneity and plasticity in bulk metallic glasses: Role of interfaces on shear banding. <b>2019</b> , 119, 156-170	52
485	Key role of excess atomic volume in structural rearrangements at the front of moving partial dislocations in copper nanocrystals. <b>2019</b> , 9, 3867	19
484	Machine learning characterization of structural defects in amorphous packings of dimers and ellipses. <i>Physical Review E</i> , <b>2019</b> , 99, 022903	14
483	A new rheological model for thixoelastic materials in subaqueous gravity driven flows. <b>2019</b> , 266, 102-117	4
482	Visualizing flow-unit-mediated deformation in a simple glass. <b>2019</b> , 165, 154-158	
481	Structural evolution and dislocation behaviour during nano-rolling process of FCC metals: A molecular dynamics simulation based investigation. <b>2019</b> , 125, 095101	7
480	Basal slip in Laves phases: The synchroshear dislocation. <b>2019</b> , 166, 134-138	18
479	Incorporating a soft ordered phase into an amorphous configuration enhances its uniform plastic deformation under shear. <b>2019</b> , 9, 015329	Ο
478	Structural evolution in deformation-induced rejuvenation in metallic glasses: A cavity perspective. <b>2019</b> , 28, 046103	3
477	Theory for the density of interacting quasilocalized modes in amorphous solids. <i>Physical Review E</i> , <b>2019</b> , 99, 023003	20
476	Dilatancy signatures of amorphous plasticity probed by X-ray synchrotron radiation. <b>2019</b> , 107, 34-38	3
475	Stress breaks universal aging behavior in a metallic glass. <b>2019</b> , 10, 5006	13
474	Fast surface dynamics enabled cold joining of metallic glasses. <b>2019</b> , 5, eaax7256	44
473	Elementary plastic events in amorphous silica. <i>Physical Review E</i> , <b>2019</b> , 100, 060602 2.4	10
472	Force fluctuations at the transition from quasi-static to inertial granular flow. 2019, 15, 8532-8542	10
471	Geometry and kinetics determine the microstructure in arrested coalescence of Pickering emulsion droplets. <b>2019</b> , 15, 9587-9596	6
470	A transferable machine-learning framework linking interstice distribution and plastic heterogeneity in metallic glasses. <b>2019</b> , 10, 5537	31
469	Glass formation by severe plastic deformation of crystalline Cu Zr nano-layers. <b>2019</b> , 165, 577-586	11

468	Slip of shuffle screw dislocations through tilt grain boundaries in silicon. <b>2019</b> , 157, 132-135	9
467	Serrated flow during inhomogeneous bending deformation of bulk metallic glasses: From self-organized critical to chaotic dynamics. <b>2019</b> , 505, 62-71	7
466	Interfacial-dislocation-controlled deformation and fracture in nanolayered composites: Toward higher ductility of drawn pearlite. <b>2019</b> , 164, 602-617	25
465	3D surface condensation of large atomic shear strain in nanoscale metallic glasses under low uniaxial stress. <b>2019</b> , 31, 025401	1
464	Susceptibility of shear banding to chemical short-range order in metallic glasses. <b>2019</b> , 162, 141-145	12
463	Stronger and more failure-resistant with three-dimensional serrated bimetal interfaces. <b>2019</b> , 166, 231-245	22
462	Mechanism of negative strain rate sensitivity in metallic glass film. <b>2019</b> , 784, 488-499	17
461	Long Time-Scale Atomistic Modeling and Simulation of Deformation and Flow in Solids. <b>2019</b> , 1-27	2
460	Thermalization of plastic flow versus stationarity of thermomechanical equilibrium in SGR theory. <b>2019</b> , 42, 2	
459	Microscopic characterization of structural relaxation and cryogenic rejuvenation in metallic glasses. <b>2019</b> , 164, 165-170	28
458	Time-resolved dynamics of the yielding transition in soft materials. <b>2019</b> , 264, 117-134	34
457	Laser Shock Tuning Dynamic Interlayer Coupling in Graphene-Boron Nitride Moir Superlattices. <b>2019</b> , 19, 283-291	11
456	Atomistic modeling of fracture. <b>2019</b> , 27, 013001	24
455	Local elasticity in nonlinear rheology of interacting colloidal glasses revealed by neutron scattering and rheometry. <b>2018</b> , 21, 38-45	4
454	Atomistic insight into the dislocation nucleation at crystalline/crystalline and crystalline/amorphous interfaces without full symmetry. <b>2019</b> , 162, 255-267	14
453	The effect of cryogenic thermal cycling on aging, rejuvenation, and mechanical properties of metallic glasses. <b>2019</b> , 503-504, 131-138	33
452	Mesoscale modeling of jet initiation behavior and microstructural evolution during cold spray single particle impact. <b>2020</b> , 182, 197-206	25
451	Understanding the strain rate sensitivity of nanocrystalline copper using molecular dynamics simulations. <b>2020</b> , 172, 109294	12

450	AADIS: An atomistic analyzer for dislocation character and distribution. <b>2020</b> , 247, 106857	10
449	Free energy calculations by molecular simulations of deformed polymer glasses. <b>2020</b> , 249, 107008	4
448	Temperature rises during strain-rate dependent avalanches in bulk metallic glasses. <b>2020</b> , 116, 106637	6
447	Lattice distortion effect on elastic anisotropy of high entropy alloys. <b>2020</b> , 818, 152876	16
446	Dislocation nucleation and evolution at the ferrite-cementite interface under cyclic loadings. <b>2020</b> , 186, 267-277	13
445	Modeling the thermo-mechanical behavior and constrained recovery performance of cold-programmed amorphous shape-memory polymers. <b>2020</b> , 127, 102654	47
444	Compaction of elastic granular materials: inter-particles friction effects and plastic events. <b>2020</b> , 16, 679-687	8
443	The effect of thermal history on the atomic structure and mechanical properties of amorphous alloys. <b>2020</b> , 174, 109477	10
442	Seismic-like size dynamics of slip avalanches in bulk metallic glasses. <b>2020</b> , 819, 152941	4
441	Molecular Dynamics simulation based investigation of possible enhancement in strength and ductility of nanocrystalline aluminum by CNT reinforcement. <b>2020</b> , 243, 122593	10
440	Deformation mechanisms of Si-doped diamond-like carbon films under uniaxial tension conditions. <b>2020</b> , 110, 108099	2
439	Adhesive wear law at the single asperity level. <b>2020</b> , 143, 104069	11
438	Non-affinity in multi-material mechanical metamaterials. <b>2020</b> , 10, 11488	10
437	Data-driven surrogates for high dimensional models using Gaussian process regression on the Grassmann manifold. <b>2020</b> , 370, 113269	8
436	State transition graph of the Preisach model and the role of return-point memory. <i>Physical Review E</i> , <b>2020</b> , 102, 012122	6
435	Atomistic Simulation of Short Crack Growth in Correlation with Fatigue Indicator Parameter. <b>2020</b> , 33, 04020063	1
434	Molecular dynamics study of the removal mechanism of SiC in a fixed abrasive polishing in water lubrication. <b>2020</b> , 46, 24961-24974	6
433	Bulk Metallic Glasses' Response to Oscillatory Stress Is Governed by the Topography of the Energy Landscape. <b>2020</b> , 124, 11294-11298	1

Changes in the Defective Structure of the Surface of a Fe77Ni1Si9B13 Metal Glass Ribbon under 432 the Influence of Hydrostatic Pressure and Isothermal Annealing, 2020, 62, 1998-2003 Atomistic investigation of aging and rejuvenation in CuZr metallic glass under cyclic loading. 2020, 431 185, 109965 Understanding the response of aluminosilicate and aluminoborate glasses to sharp contact loading 6 430 using molecular dynamics simulation. 2020, 128, 035106 Expanding the homogeneous regime of deformation in bulk metallic glass by 429 electromigration-induced rejuvenation. 2020, 1, Plume deformation, mixing, and reaction kinetics: An analysis of interacting helical flows in 428 2.4 2 three-dimensional porous media. Physical Review E, 2020, 102, 013110 A delayed yielding transition in mechanically annealed binary glasses at finite temperature. 2020, 5 548, 120324 426 Brittle-ductile transitions in a metallic glass. Physical Review E, 2020, 101, 063004 2.4 3 Atomic structure of Co92NBxTa8 glassy alloys studied by ab initio molecular dynamics simulations. **2020**, 120, e26406 Applicability of cutting theory to nanocutting of metallic glasses: Atomistic simulation. 2020, 550, 120363 11 Alternating Shear Orientation During Cyclic Loading Facilitates Yielding in Amorphous Materials. 423 7 2020, 29, 7328-7335 Origin of liquid fragility. Physical Review E, 2020, 102, 042615 8 422 2.4 Nanoparticle simulations of logarithmic creep and microprestress relaxation in concrete and other 421 disordered solids. 2020, 137, 106181 Guiding shear bands in bulk metallic glasses using stress fields: A perspective from the activation of 420 4 flow units. 2020, 102, Ultrasonic plasticity of metallic glass near room temperature. 2020, 21, 100866 419 Probing intermittency and reversibility in a dense granular suspension under shear using multiply 418  $\circ$ scattered ultrasound. 2020, 16, 10716-10722 Origin of reversible and irreversible atomic-scale rearrangements in a model two-dimensional 417 2.4 network glass. Physical Review E, 2020, 102, 033006 Connecting shear localization with the long-range correlated polarized stress fields in granular 416 4 materials. 2020, 11, 4349 Aspect ratio-dependent nanoindentation behavior of Cu64Zr36 metallic glass nanopillars investigated by molecular dynamics simulations. 2020, 128, 084303

414	Sheared Amorphous Packings Display Two Separate Particle Transport Mechanisms. <b>2020</b> , 125, 138001	2
413	Residual stress distributions in amorphous solids from atomistic simulations. <b>2020</b> , 16, 8940-8949	5
412	Molecular characterization of ebselen binding activity to SARS-CoV-2 main protease. <b>2020</b> , 6,	43
411	Effect of polymer-nanoparticle interaction on strain localization in polymer nanopillars. <b>2020</b> , 16, 8639-8646	2
410	Entropy decay during grain growth. <b>2020</b> , 10, 11912	4
409	Creep Deformation of a Cu-Zr Nanoglass and Interface Reinforced Nanoglass-Composite Studied by Molecular Dynamics Simulations. <b>2020</b> , 7,	2
408	Atomistic Simulation of Nano-Rolling Process for Nanocrystalline Tungsten. <b>2020</b> , 72, 3977-3986	3
407	Microscopic origin of shear banding as a localized driven glass transition in compressed colloidal pillars. <i>Physical Review E</i> , <b>2020</b> , 102, 032605	1
406	Strain localization and failure of disordered particle rafts with tunable ductility during tensile deformation. <b>2020</b> , 16, 8226-8236	1
405	Vibration controlled foam yielding. <b>2020</b> ,	
404	Universality of the Nonphononic Vibrational Spectrum across Different Classes of Computer Glasses. <b>2020</b> , 125, 085502	32
403	Ultrastable Metallic Glasses In Silico. <b>2020</b> , 125, 085505	9
402	Elucidating the G? overshoot in soft materials with a yield transition via a time-resolved experimental strain decomposition. <b>2020</b> , 117, 21945-21952	44
401	Aging in a mean field elastoplastic model of amorphous solids. <b>2020</b> , 32, 127104	8
400	Unraveling strongly entropic effect on Erelaxation in metallic glass: Insights from enhanced atomistic samplings over experimentally relevant timescales. <b>2020</b> , 102,	1
399	Extracting the properties of quasilocalized modes in computer glasses: Long-range continuum fields, contour integrals, and boundary effects. <i>Physical Review E</i> , <b>2020</b> , 102, 033008	6
398	A multi-component lattice Boltzmann approach to study the causality of plastic events. <b>2020</b> , 378, 20190403	
397	Scaling of relaxation and excess entropy in plastically deformed amorphous solids. <b>2020</b> , 117, 11887-11893	5

396	Origin of the Bauschinger Effect in Amorphous Solids. <b>2020</b> , 124, 205503	15
395	Coordinate transformation methodology for simulating quasistatic elastoplastic solids. <i>Physical Review E</i> , <b>2020</b> , 101, 053304	1
394	Shear Bands in Monolithic Metallic Glasses: Experiment, Theory, and Modeling. <b>2020</b> , 7,	6
393	Composition dependence of metallic glass plasticity and its prediction from anelastic relaxation <b>[A</b> shear transformation zone analysis. <b>2020</b> , 195, 81-86	7
392	Tuning the strain rate sensitivity and ductility of Zr55Al10Cu30Ni5 metallic glass by He+ ion irradiation. <b>2020</b> , 840, 155562	1
391	Nonlinear quasilocalized excitations in glasses: True representatives of soft spots. <i>Physical Review E</i> , <b>2020</b> , 101, 032130	15
390	Rheoacoustic Gels: Tuning Mechanical and Flow Properties of Colloidal Gels with Ultrasonic Vibrations. <b>2020</b> , 10,	6
389	Parallel three-dimensional simulations of quasi-static elastoplastic solids. <b>2020</b> , 257, 107254	5
388	Cell position fates and collective fountain flow in bacterial biofilms revealed by light-sheet microscopy. <b>2020</b> , 369, 71-77	45
387	Rheology of hard glassy materials. <b>2020</b> , 32, 395402	2
386	Structural relaxation in amorphous materials under cyclic tension-compression loading. <b>2020</b> , 540, 120098	9
385	Chaotic dynamics in shear-band-mediated plasticity of metallic glasses. <b>2020</b> , 101,	5
384	Machine learning bridges local static structure with multiple properties in metallic glasses. <b>2020</b> , 40, 48-62	19
383	Depletion attraction impairs the plasticity of emulsions flowing in a constriction. <b>2020</b> , 16, 3294-3302	5
382	Nanoindentation of polycrystalline Pd hollow nanoparticles: Grain size role. <b>2020</b> , 179, 109642	10
381	Rejuvenation and shear banding in model amorphous solids. <i>Physical Review E</i> , <b>2020</b> , 101, 033001 2.4	19
380	Soft-Mode Parameter as an Indicator for the Activation Energy Spectra in Metallic Glass. <b>2020</b> , 11, 2781-2787	2
379	Phase-Control-Enabled Enhancement in Hydrophilicity and Mechanical Toughness in Nanocrystalline Tungsten Oxide Films for Energy-Related Applications. <b>2020</b> , 3, 3264-3274	4

# (2020-2020)

378	Quantification of plasticity via particle dynamics above and below yield in a 2D jammed suspension. <b>2020</b> , 16, 4373-4382		3
377	Shear Band Formation in Amorphous Materials under Oscillatory Shear Deformation. <b>2020</b> , 10, 300		12
376	Interpretation of Phase Boundary Fluctuation Spectra in Biological Membranes with Nanoscale Organization. <b>2020</b> , 16, 2736-2750		4
375	Forming of metallic glasses: mechanisms and processes. <b>2020</b> , 7, 100077		14
374	Thickness-dependent shear localization in Cu/Nb metallic nanolayered composites. 2020, 187, 323-328		7
373	Indirectly probing the structural change in ion-irradiated Zr-Based metallic glasses from small scale mechanical tests. <b>2020</b> , 121, 106794		3
372	Complex strengthening mechanisms in the NbMoTaW multi-principal element alloy. 2020, 6,		35
371	Spatiotemporal Analysis of Nonaffine Displacements in Disordered Solids Sheared Across the Yielding Point. <b>2020</b> , 51, 3713-3720		8
370	Degeneracy in molecular scale organization of biological membranes. <b>2020</b> , 16, 6752-6764		2
369	Non-monotonic response of a sheared magnetic liquid crystal to a continuously increasing external field. <b>2020</b> , 152, 024505		8
368	A crossover in spatio-temporal correlations of strain fluctuations in glass forming liquids. <b>2020</b> , 2020, 014002		2
367	The emergence of small-scale self-affine surface roughness from deformation. <b>2020</b> , 6, eaax0847		21
366	Critical force in active microrheology. <i>Physical Review E</i> , <b>2020</b> , 101, 012612	1	6
365	Statistical complexity of potential energy landscape as a dynamic signature of the glass transition. <b>2020</b> , 101,		7
364	Pinching a glass reveals key properties of its soft spots. <b>2020</b> , 117, 5228-5234		39
363	Annealing and rejuvenation in a two-dimensional model amorphous solid under oscillatory shear.  Physical Review E, <b>2020</b> , 101, 012603	1	13
362	Impact of hydrogen microalloying on the mechanical behavior of Zr-bearing metallic glasses: A molecular dynamics study. <b>2020</b> , 45, 198-206		7
361	Tensorial description of the plasticity of amorphous composites. <i>Physical Review E</i> , <b>2020</b> , 101, 043004 2.2	1	4

360	Origin of Mechanical Enhancement in Polymer Nanoparticle (NP) Composites with Ultrahigh NP Loading. <b>2020</b> , 53, 2976-2982	15
359	Unveiling the predictive power of static structure in glassy systems. <b>2020</b> , 16, 448-454	84
358	An atomistic study of shear-band formation during cutting of metallic glasses. <b>2020</b> , 127, 115101	10
357	Plasticity of borosilicate glasses under uniaxial tension. <b>2020</b> , 103, 4295-4303	9
356	Precursors to plastic failure in a numerical simulation of CuZr metallic glass. 2020, 32, 174003	1
355	Shear localization as a mesoscopic stress-relaxation mechanism in fused silica glass at high strain rates. <b>2020</b> , 140, 103940	2
354	Understanding the Stability of Hollow Nanoparticles with Polycrystalline Shells. 2020, 124, 10143-10149	4
353	Stress Distribution in Silicon Subjected to Atomic Scale Grinding with a Curved Tool Path. <b>2020</b> , 13,	4
352	Molecular dynamics simulation of mechanical properties of polystyrene nanoparticles under uniaxial compression test. <b>2020</b> , 178, 109553	6
351	Effects of minor alloying on the mechanical properties of Al based metallic glasses. <b>2021</b> , 854, 157266	1
350	Atomistic investigation on initiation of stress corrosion cracking of polycrystalline Ni60Cr30Fe10 alloys under high-temperature water by reactive molecular dynamics simulation. <b>2021</b> , 187, 110087	4
349	New evidences for understanding the serrated flow and shear band behavior in nanoindentation of metallic glasses. <b>2021</b> , 857, 157587	2
348	Dynamic fragmentation of a Zr-based metallic glass under various impact velocities. <b>2021</b> , 56, 2900-2911	1
347	Accelerated rejuvenation in metallic glasses subjected to elastostatic compression along alternating directions. <b>2021</b> , 556, 120562	6
346	A theory for coupled lithium insertion and viscoplastic flow in amorphous anode materials for Li-ion batteries. <b>2021</b> , 152, 103663	9
345	A structural approach to vibrational properties ranging from crystals to disordered systems. <b>2021</b> , 17, 1330-1336	1
344	Cu nanoprecipitate morphologies and interfacial energy densities in bcc Fe from density functional theory (DFT). <b>2021</b> , 188, 110149	4
343	Nonlocality in granular complex networks: Linking topology, kinematics and forces. <b>2021</b> , 42, 101041	4

342	Short- and Long-Range Particle-Matrix Interphases. <b>2021</b> , 143-178		1
341	Molecular Dynamics Simulation-Based Investigation of Mechanical Behavior of CNT Embedded Nanocrystalline Al at Cryogenic Temperature. <b>2021</b> , 211-221		
340	Cycle Deformation Enabled Controllable Mechanical Polarity of Bulk Metallic Glasses.		
339	Using delaunay triangularization to characterize non-affine displacement fields during athermal, quasistatic deformation of amorphous solids. <b>2021</b> , 17, 8612-8623		
338	Quantifying the link between local structure and cellular rearrangements using information in models of biological tissues. <b>2021</b> , 17, 10242-10253		5
337	Metallic glasses. <b>2021</b> , 275-300		1
336	Simple and Broadly Applicable Definition of Shear Transformation Zones. <b>2021</b> , 126, 015501		14
335	X-Ray Tomography Investigation of Cyclically Sheared Granular Materials. <b>2021</b> , 126, 048002		5
334	Constant twist rate response of symmetric and asymmetric <b>B</b> aluminium tilt grain boundaries: molecular dynamics study of deformation processes. <b>2021</b> , 56, 8544-8562		1
333	Pressure effects on shear deformation of borosilicate glasses. <b>2021</b> , 104, 3073-3086		1
332	Constitutive modeling of size-dependent deformation behavior in nano-dual-phase glass-crystal alloys. <b>2021</b> , 137, 102918		3
331	Learning-based approach to plasticity in athermal sheared amorphous packings: Improving softness. <b>2021</b> , 9, 021107		4
330	Atomic nonaffinity as a predictor of plasticity in amorphous solids. <b>2021</b> , 5,		4
329	Mechanical disorder of sticky-sphere glasses. II. Thermomechanical inannealability. <i>Physical Review E</i> , <b>2021</b> , 103, 022606	2.4	8
328	Mechanical disorder of sticky-sphere glasses. I. Effect of attractive interactions. <i>Physical Review E</i> , <b>2021</b> , 103, 022605	2.4	12
327	Identifying packing features of atoms with distinct dynamic behaviors in metallic glass by machine-learning method. <b>2021</b> , 64, 1820-1826		1
326	Predicting orientation-dependent plastic susceptibility from static structure in amorphous solids via deep learning. <b>2021</b> , 12, 1506		10
325	Elasto-plastic behavior of amorphous materials: a brief review. <b>2021</b> , 22, 1-17		3

324	Universal nature of the saddle states of structural excitations in metallic glasses. <b>2021</b> , 17, 100359	6
323	Anisotropic shock responses of nanoporous Al by molecular dynamics simulations. <b>2021</b> , 16, e0247172	2
322	Atomistic Simulation on the Mechanical Properties of Diffusion Bonded Zr-Cu Metallic Glasses with Oxidized Interfaces. <b>2021</b> , 52, 1939-1946	2
321	From elastic excitations to macroscopic plasticity in metallic glasses. <b>2021</b> , 22, 100958	4
320	Unveiling correlation between ₹ relaxation and yielding behavior in metallic glasses. 2021, 103,	О
319	Nanomechanics serving polymer-based composite research. <b>2021</b> , 22, 1-22	4
318	Rejuvenation of a naturally aged bulk metallic glass by elastostatic loading. 2021, 806, 140843	3
317	Macroscopic viscoelastic deformation at room temperature in mechanically rejuvenated Zr-based metallic glass. <b>2021</b> , 11, 330-335	
316	Quantitative structure-plasticity relationship in metallic glass: A machine learning study*. <b>2021</b> , 30, 057103	0
315	Impact resistance of single-layer metallic glass nanofilms to high-velocity micro-particle penetration. <b>2021</b> , 44, 101258	3
314	Friction and Plasticity in Contacts Between Amorphous Solids. <b>2021</b> , 69, 1	2
313	Elastoplastic Approach Based on Microscopic Insights for the Steady State and Transient Dynamics of Sheared Disordered Solids. <b>2021</b> , 126, 138005	5
312	One-to-one correlation between the kinetics of the enthalpy changes and the number of defects assumed responsible for structural relaxation in metallic glasses. <b>2021</b> , 558, 120672	3
311	Extrinsic plastic hardening of polymer thin films in flat punch indentation. <b>2021</b> , 101, 1327-1342	O
310	Rheological characterization of CNC-CTAB network below and above critical micelle concentration (CMC). <b>2021</b> , 257, 117552	10
309	Criticality in sheared, disordered solids. I. Rate effects in stress and diffusion. <i>Physical Review E</i> , 2.4	2
308	Avalanches in the Athermal Quasistatic Limit of Sheared Amorphous Solids: An Atomistic Perspective. <b>2021</b> , 69, 1	0
307	Nanoindentation of Nanoglasses Tested by Molecular Dynamics Simulations: Influence of Structural Relaxation and Chemical Segregation on the Mechanical Response. <b>2021</b> , 8,	1

306	A universal criterion for the failure threshold in slowly sheared bulk metallic glasses. <b>2021</b> , 129, 155109	3
305	An enhanced tool for probing the microscopic behavior of granular materials based on X-ray micro-CT and FDEM. <b>2021</b> , 132, 103974	12
304	Yielding in an Integer Automaton Model for Amorphous Solids under Cyclic Shear. <b>2021</b> , 126, 218005	8
303	Atomistic understanding of creep and relaxation mechanisms of Cu64Zr36 metallic glass at different temperatures and stress levels. <b>2021</b> , 559, 120676	7
302	Micro-plasticity in a fragile model binary glass. <b>2021</b> , 209, 116771	4
301	Accessing a broader range of energy states in metallic glasses by variable-amplitude oscillatory shear. <b>2021</b> , 560, 120746	3
300	Molecular Dynamics Study of the Nanoindentation Behavior of CuZr/Cu Amorphous/Crystalline Nanolaminate Composites. <b>2021</b> , 14,	2
299	Insights from the quantitative calibration of an elasto-plastic model from a Lennard-Jones atomic glass. <b>2021</b> , 22, 1-28	1
298	Crystalline shielding mitigates structural rearrangement and localizes memory in jammed systems under oscillatory shear. <b>2021</b> , 7,	6
297	Predicting the early-stage creep dynamics of gels from their static structure by machine learning. <b>2021</b> , 210, 116817	8
296	Atomistic analyses of HCP-FCC transformation and reorientation of Ti in Al-Ti multilayers. <b>2021</b> , 192, 110329	2
295	Topology of the energy landscape of sheared amorphous solids and the irreversibility transition.  Physical Review E, <b>2021</b> , 103, 062614	5
294	Atomic-level mechanism of spallation microvoid nucleation in medium entropy alloys under shock loading. <b>2021</b> , 64, 1360-1370	1
293	Microscopic Carriers of Plasticity in Glassy Polystyrene. <b>2021</b> , 30, 2100021	1
292	The perpetual fragility of creeping hillslopes. <b>2021</b> , 12, 3909	3
291	Response of an amorphous/crystalline interface to nanoindentation: an atomistic study. <b>2021</b> , 551, 149285	5
290	Coarse-grained molecular dynamics simulation of cis-1,4-polyisoprene with silica nanoparticles under extreme uniaxial tension. <b>2021</b> , 29, 055013	3
289	Plasticity in Amorphous Solids Is Mediated by Topological Defects in the Displacement Field. <b>2021</b> , 127, 015501	6

288	Predicting and following T1 events in dry foams from geometric features. <b>2021</b> , 5,	1
287	Shear induced deformation twinning evolution in thermoelectric InSb. <b>2021</b> , 7,	4
286	Atomistic modelling of thermal-cycling rejuvenation in metallic glasses. <b>2021</b> , 213, 116952	7
285	Effects of Strain Rate and Temperature on the Mechanical Properties of Simulated Silica Ionogels. <b>2021</b> , 125, 8659-8671	1
284	Atomistic simulation of crack propagation in CNT reinforced nanocrystalline aluminum under uniaxial tensile loading. <b>2021</b> , 101, 1942-1964	1
283	Elastoplasticity Mediates Dynamical Heterogeneity Below the Mode Coupling Temperature. <b>2021</b> , 127, 048002	3
282	Ultrasonic-assisted rapid cold welding of bulk metallic glasses. 1	3
281	Shear band healing in amorphous materials by small-amplitude oscillatory shear deformation. <b>2021</b> , 566, 120874	3
280	Correlations between the hierarchical spatial heterogeneity and the mechanical properties of metallic glasses. <b>2021</b> , 204, 106570	1
279	Machine-learning integrated glassy defect from an intricate configurational-thermodynamic-dynamic space. <b>2021</b> , 104,	4
278	Strain rate-dependent tensile response of glassy silicon nanowires studied by accelerated atomistic simulations. <b>2021</b> , 130, 085105	0
277	Manifold learning for coarse-graining atomistic simulations: Application to amorphous solids. <b>2021</b> , 215, 117008	5
276	Thermally activated flow in models of amorphous solids. <i>Physical Review E</i> , <b>2021</b> , 104, 025010 2.4	О
275	Molecular dynamics simulation of AFM tip-based hot scratching of nanocrystalline GaAs. <b>2021</b> , 130, 105832	6
274	Towards damage resistant Al2O3BiO2 glasses with structural and chemical heterogeneities through consolidation of glassy nanoparticles. <b>2021</b> , 215, 117016	2
273	Superposed shear and compression of strong colloidal gels. <b>2021</b> , 65, 837-853	1
272	Inverse design of glass structure with deep graph neural networks. <b>2021</b> , 12, 5359	1
271	Effect of alloying oxygen on the microstructure and mechanical properties of Zr-based bulk metallic glass. <b>2021</b> , 117345	8

## (2005-2021)

270	From brittle to ductile transition: The influence of oxygen on mechanical properties of metallic glasses. <b>2021</b> , 876, 160023	4
269	Brittle-to-ductile transitions in glasses: Roles of soft defects and loading geometry. 1	2
268	Atomistic processes of surface-diffusion-induced abnormal softening in nanoscale metallic crystals. <b>2021</b> , 12, 5237	5
267	From mechanism-based to data-driven approaches in materials science. <b>2021</b> , 5,	2
266	Critical growth and energy barriers of atomic-scale plastic flow units in metallic glasses. <b>2021</b> , 202, 114033	О
265	Fourier-like Thermal Relaxation of Nanoscale Explosive Hot Spots. <b>2021</b> , 125, 20570-20582	3
264	Signatures of the spatial extent of plastic events in the yielding transition in amorphous solids. <i>Physical Review E</i> , <b>2021</b> , 104, 034603	1
263	Cavity-mediated cooperative shear transformation in metallic glasses. <b>2021</b> , 130, 125104	О
262	Machine learning atomic-scale stiffness in metallic glass. <b>2021</b> , 48, 101446	2
261	Applicability of interface spring and interphase models in micromechanics for predicting effective stiffness of polymer-matrix nanocomposite. <b>2021</b> , 49, 101489	1
260	Effect of deep cryogenic cycling treatment on the microstructure and mechanical properties of Ti-based bulk metallic glass. <b>2021</b> , 887, 161386	1
259	Yielding transition in stable glasses periodically deformed at finite temperature. <b>2021</b> , 200, 110831	1
258	Tension-compression behavior in gold nanoparticle arrays: a molecular dynamics study. <b>2021</b> , 32, 145715	1
257	Motility-induced fracture reveals a ductile-to-brittle crossover in a simple animal epithelia. <b>2021</b> , 17, 504-511	11
256	The energy landscape governs ductility in disordered materials. <b>2021</b> , 8, 1242-1252	7
255	On the yielding of a point-defect-rich model crystal under shear: insights from molecular dynamics simulations. <b>2021</b> , 17, 8536-8552	1
254	Microscopic Elasticity of Complex Systems. <b>2006</b> , 287-307	5
253	Atomistic Calculation of Mechanical Behavior. <b>2005</b> , 773-792	1

252	Toward a Shear-Transformation-Zone Theory of Amorphous Plasticity. <b>2005</b> , 1281-1312	2
251	AlSiC Thermal Management Materials. <b>2013</b> , 109-122	1
250	Molecular Simulation of Plastic Deformation of Oligomer Systems. <b>2019</b> , 303-312	1
249	Plastic Deformation in Disordered Solids: The State of the Art and Unresolved Problems. <b>2019</b> , 313-332	1
248	Atomistic Simulation Methods and their Application on Fracture. <b>2010</b> , 1-57	3
247	Discussion and Outlook. 2013, 163-178	1
246	Novel atomic-scale mechanism of incipient plasticity in a chemically complex CrCoNi medium-entropy alloy associated with inhomogeneity in local chemical environment. <b>2020</b> , 194, 283-294	32
245	Molecular dynamic investigation of the structure and stress in crystalline and amorphous silicon during lithiation. <b>2020</b> , 183, 109811	5
244	On the formation of shear bands in a metallic glass under tailored complex stress fields. <b>2020</b> , 53, 112-117	12
243	Predicting the propensity for thermally activated Levents in metallic glasses via interpretable machine learning. <b>2020</b> , 6,	13
242	Collisions between amorphous carbon nanoparticles: phase transformations. <b>2020</b> , 641, A159	3
241	Nanoindentation response of laser shock peened Ti-based bulk metallic glass. <b>2015</b> , 5, 057156	7
240	The role of collective elasticity on activated structural relaxation, yielding, and steady state flow in hard sphere fluids and colloidal suspensions under strong deformation. <b>2020</b> , 153, 194502	9
239	Intrinsic Disorder and Degeneracy in Molecular Scale Organization of Biological Membrane.	1
238	Motility induced fracture reveals a ductile to brittle crossover in the epithelial tissues of a simple animal.	3
237	Rheology of granular flows across the transition from soft to rigid particles. <b>2017</b> , 2,	23
236	Dependence of triboelectric charging behavior on material microstructure. 2017, 1,	23
235	Elucidating the atomistic mechanisms underpinning plasticity in Li-Si nanostructures. <b>2017</b> , 1,	6

234	Low-temperature anomalies of a vapor deposited glass. <b>2018</b> , 2,	23
233	Molecular origins of anisotropic shock propagation in crystalline and amorphous polyethylene. <b>2018</b> , 2,	10
232	Necking instabilities in elastoviscoplastic materials. <b>2018</b> , 2,	1
231	High flexoelectric constants in Janus transition-metal dichalcogenides. <b>2019</b> , 3,	16
230	Pattern formation during deformation of metallic nanolaminates. <b>2020</b> , 4,	4
229	Brittle yielding of amorphous solids at finite shear rates. <b>2020</b> , 4,	22
228	Twinning and rotational deformation of nanocrystalline NiTi under shock loading. 2020, 4,	2
227	Predicting plasticity in disordered solids from structural indicators. <b>2020</b> , 4,	44
226	Correlated disorder in a model binary glass through a local SU(2) bonding topology. 2020, 4,	3
225	Role of fluctuations in the yielding transition of two-dimensional glasses. <b>2020</b> , 2,	10
225	Role of fluctuations in the yielding transition of two-dimensional glasses. 2020, 2,  Machine learning and predicting the time-dependent dynamics of local yielding in dry foams. 2020, 2,	10
	Machine learning and predicting the time-dependent dynamics of local yielding in dry foams. <b>2020</b> ,	
224	Machine learning and predicting the time-dependent dynamics of local yielding in dry foams. <b>2020</b> , 2,	3
224	Machine learning and predicting the time-dependent dynamics of local yielding in dry foams. 2020, 2,  Cavity formation in deformed amorphous solids on the nanoscale. 2020, 2,	3
224	Machine learning and predicting the time-dependent dynamics of local yielding in dry foams. 2020, 2,  Cavity formation in deformed amorphous solids on the nanoscale. 2020, 2,  Analogies between growing dense active matter and soft driven glasses. 2020, 2,	3 2 3
224 223 222	Machine learning and predicting the time-dependent dynamics of local yielding in dry foams. 2020, 2,  Cavity formation in deformed amorphous solids on the nanoscale. 2020, 2,  Analogies between growing dense active matter and soft driven glasses. 2020, 2,  Fracture Toughness of Biological Composites With Multilevel Structural Hierarchy. 2020, 87,	3 2 3
224 223 222 221 220	Machine learning and predicting the time-dependent dynamics of local yielding in dry foams. 2020, 2,  Cavity formation in deformed amorphous solids on the nanoscale. 2020, 2,  Analogies between growing dense active matter and soft driven glasses. 2020, 2,  Fracture Toughness of Biological Composites With Multilevel Structural Hierarchy. 2020, 87,  Mechanical Properties and Deformation Mechanism of Metallic Glasses. 2009, 58, 199-204	3 2 3 2

216	Crack Length Effect on the Fracture Behavior of Single-Crystals and Bi-Crystals of Aluminum. <b>2021</b> , 11,	1
215	Bond-space operator disentangles quasilocalized and phononic modes in structural glasses.  Physical Review E, <b>2021</b> , 104, 044905  2.4	3
214	Strongly Anisotropic Thermomechanical Response to Shock Wave Loading in Oriented Samples of the Triclinic Molecular Crystal 1,3,5-Triamino-2,4,6-trinitrobenzene. <b>2021</b> , 125, 22747-22765	1
213	Predicting plastic events and quantifying the local yield surface in 3D model glasses. 2022, 158, 104671	1
212	Influence of surface stress on the mechanical response of nanoporous metals studied by an atomistically informed continuum model. <b>2021</b> , 221, 117373	
211	Atomistic Modeling Methods. 146-163	1
<b>2</b> 10	Generalized Junction Model. <b>2013</b> , 61-74	
209	The MIMEAC Contact Model. <b>2013</b> , 119-162	
208	Introduction. <b>2013</b> , 1-16	
207	Fractal Surface Model. 2013, 75-117	
207	Fractal Surface Model. 2013, 75-117  Asperity Creep Under Constant Force. 2013, 41-60	
206	Asperity Creep Under Constant Force. <b>2013</b> , 41-60  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with	1
206	Asperity Creep Under Constant Force. 2013, 41-60  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with Nonmetallic Particles Fabricated by CGG Process. 2015, 161-168  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with	1 0
206	Asperity Creep Under Constant Force. 2013, 41-60  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with Nonmetallic Particles Fabricated by CGG Process. 2015, 161-168  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with Nonmetallic Particles Fabricated by CGG Process. 161-168	
206 205 204 203	Asperity Creep Under Constant Force. 2013, 41-60  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with Nonmetallic Particles Fabricated by CGG Process. 2015, 161-168  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with Nonmetallic Particles Fabricated by CGG Process. 161-168  A summary of soft matter theories. 2016, 65, 186102	0
206 205 204 203	Asperity Creep Under Constant Force. 2013, 41-60  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with Nonmetallic Particles Fabricated by CGG Process. 2015, 161-168  Effect of Distribution and Mechanical Properties of Aluminum Composite Reinforced with Nonmetallic Particles Fabricated by CGG Process. 161-168  A summary of soft matter theories. 2016, 65, 186102  Self-organized critical behavior in plastic flow of amorphous solids. 2017, 66, 178103  Characterization of nanoscale structural heterogeneity in an amorphous alloy by synchrotron small	3

198	Characterizing the Liquid-liquid Phase Co-existence in Biomembrane: Insights from Local Non-affine Deformation and Topological Rearrangements.	
197	From Microscopic Insight to Constitutive Models: Bridging Length Scales in Soft and Hard Materials. <b>2018</b> , 1-19	3
196	Interpretation of Phase Boundary Fluctuation Spectra in Biological Membranes with Nanoscale Organization.	
195	Microstructure evolution during near-Tg annealing and its effect on shear banding in model alloys. <b>2019</b> , 3,	2
194	From Microscopic Insight to Constitutive Models: Bridging Length Scales in Soft and Hard Materials. <b>2020</b> , 1-19	
193	Interplay of Rearrangements, Strain, and Local Structure during Avalanche Propagation. 2021, 11,	1
192	Low-energy quasilocalized excitations in structural glasses. <b>2021</b> , 155, 200901	4
191	Predicting Fracture Propensity in Amorphous Alumina from Its Static Structure Using Machine Learning. <b>2021</b> ,	5
190	Fracture toughness of a rejuvenated ETi reinforced bulk metallic glass matrix composite. <b>2022</b> , 106, 225-235	3
189	Correlation between the topologically close-packed structure and the deformation behavior of metallic CuZr. <b>2021</b> , 23, 25933-25943	3
188	Long Time-Scale Atomistic Modeling and Simulation of Deformation and Flow in Solids. 2020, 237-263	
187	From Microscopic Insight to Constitutive Models: Bridging Length Scales in Soft and Hard Materials. <b>2020</b> , 1793-1811	
186	Steady state dynamic dependence between local mobility and non-affine fluctuations in two-dimensional aggregates. <b>2020</b> , 32, 214004	0
185	Dislocation transmission across B{112} incoherent twin boundary: a combined atomistic and phase-field study. <b>2021</b> , 223, 117447	2
184	Discrete-Continuum Transition in Modelling Nanomaterials. <b>2009</b> , 63-74	
183	Atomistic investigation of mechanical properties of metallic glass nanocomposites. <b>2020</b> , 28, 085004	O
182	Wrinkles, folds, and ripplocations: Unusual deformation structures of confined elastic sheets at nonzero temperatures. <b>2020</b> , 2,	0
181	Toward a Shear-Transformation-Zone Theory of Amorphous Plasticity. <b>2005</b> , 1281-1312	1

180	Dynamic responses in shocked Cu-Zr nanoglasses with gradient microstructure. <b>2022</b> , 149, 103154	О
179	A new strategy to strength-toughen metals: Tailoring disorder. <b>2021</b> , 100310	О
178	Anisotropic strength behavior of single-crystal TATB.	О
177	Dynamics of a driven harmonic oscillator coupled to pairwise interacting Ising spins in random fields <i>Physical Review E</i> , <b>2021</b> , 104, 054212	O
176	SPaMD studio: An integrated platform for atomistic modeling, simulation, analysis, and visualization. <b>2021</b> , 111027	1
175	Emergent Fractal Energy Landscape as the Origin of Stress-Accelerated Dynamics in Amorphous Solids. <b>2021</b> , 127, 215502	O
174	Microscopic Theory for the Rheology of Jammed Soft Suspensions. <b>2021</b> , 127, 218003	4
173	Stress and Deformation During Solidification of Amorphous Alloys Causes Microstructural Inhomogeneity. <b>2022</b> , 53, 6	
172	Substantially enhanced plasticity of bulk metallic glasses by densifying local atomic packing. <b>2021</b> , 12, 6582	5
171	The Creep Deformation and Structural Dynamics of Zr 47.5Cu 47.5Al 5 Metallic Glass Upon DCT Treatment.	
170	Observation of dynamical transformation plasticity in metallic nanocomposites through a precompiled machine-learning algorithm. <b>2022</b> , 10, 14-20	1
169	Molecular dynamics studies of <a> -type screw dislocation core structure polymorphism in titanium. <b>2022</b>, 6,</a>	1
168	Atomistic simulation of martensite microstructural evolution during temperature driven ₽ transition in pure titanium. <b>2022</b> , 203, 111057	1
167	Cycle deformation enabled controllable mechanical polarity of bulk metallic glasses. <b>2022</b> , 225, 117557	O
166	Correlation between plastic rearrangements and local structure in a cyclically driven glass <b>2022</b> , 156, 074503	1
165	Rejuvenation in Deep Thermal Cycling of a Generic Model Glass: A Study of Per-Particle Energy Distribution <b>2022</b> , 15,	1
164	Thermodynamic approach for the understanding of the kinetics of heat elects induced by structural relaxation of metallic glasses <b>2021</b> ,	О
163	Annealing metallic glasses above Tg in order to accelerate the relaxation process in molecular dynamics simulations. <b>2022</b> , 120, 011904	O

162	Quantifying local rearrangements in three-dimensional granular materials: Rearrangement measures, correlations, and relationship to stresses <i>Physical Review E</i> , <b>2022</b> , 105, 014904	·4	2
161	Shock-induced plasticity and phase transformation in single crystal magnesium: An interatomic potential and non-equilibrium molecular dynamics simulations <b>2021</b> ,		3
160	Searching for structural predictors of plasticity in dense active packings 2022,		
159	Nanoscale structural heterogeneity and magnetic properties of Fe-based amorphous alloys via Co and Ni additions. <b>2022</b> , 904, 164067		1
158	Heterogeneous evolution of lattice defects leading to high strength and high ductility in harmonic structure materials through atomic and dislocation simulations. <b>2022</b> , 226, 117679		1
157	Nanoheterogeneous ZrTa metallic glass thin films with high strength and toughness. <b>2022</b> , 901, 163578		O
156	On the Effect of Adhesive Strength and Scratching Depth on Material Transfer During Nanoscale Scratching. <b>2022</b> , 70, 1		1
155	Fatigue behaviors of diamond-like carbon films. <b>2022</b> , 124, 108892		
154	Mechanical properties and damage analysis of S-glass: A reactive molecular dynamics study. <b>2022</b> , 234, 109706		1
153	Advancing the Mechanical Performance of Glasses: Perspectives and Challenges. <b>2021</b> , e2109029		8
152	Avalanche dynamics in sheared athermal particle packings occurs localized bursts predicted by unstable linear response <b>2022</b> ,		0
151	Statistical Physics of the Yielding Transition. <b>2022</b> , 1-9		
150	Molecular Dynamics Simulation of the Effect of Cementite Decomposition on Yield Phenomena in Pearlite Microstructure. <b>2022</b> , 62, 343-352		0
149	Synergistic Effect of Different Plastic Deformation Modes: Molecular Dynamics Study on Strength of Crystalline/Amorphous Mixed Systems. <b>2022</b> , 71, 135-142		
148	The Effect of Free Volume on the Crystallization of Al87Ni8Gd5 Amorphous Alloy. 2022, 12, 332		1
147	Grassmannian diffusion maps based surrogate modeling via geometric harmonics.		1
146	Derivation of a constitutive model for the rheology of jammed soft suspensions from particle dynamics. <b>2022</b> , 2022, 033206		
145	Shear banding instability in multicomponent metallic glasses: Interplay of composition and short-range order. <b>2022</b> , 105,		0

144	Relationships between structure, memory and flow in sheared disordered materials.	2
143	Role of Local Structure in the Enhanced Dynamics of Deformed Glasses <b>2022</b> , 128, 097801	O
142	Atomistic study on simultaneous achievement of partial crystallization and rejuvenated glassy structure in thermal process of metallic glasses. 1-22	1
141	Relaxation Dynamics in the Energy Landscape of Glass-Forming Liquids. <b>2022</b> , 12,	2
140	Cooperative effects driving the multi-periodic dynamics of cyclically sheared amorphous solids <b>2022</b> , 156, 164506	1
139	Size effects and plastic deformation mechanisms in single-crystalline CoCrFeNi micro/nanopillars. <b>2022</b> , 162, 104853	O
138	Molecular dynamics study of fracture and plastic deformation of Cu/Cu64Zr36 crystalline/amorphous composites with a pre-existing void. <b>2022</b> , 586, 121556	О
137	Chemical-Reaction-Induced deformation of Body-Centered cubic iron in supercritical water leading to high risk of cleavage Fracture: A reactive Molecular dynamics study. <b>2022</b> , 208, 111354	
136	A hierarchically correlated flow defect model for metallic glass: Universal understanding of stress relaxation and creep. <b>2022</b> , 154, 103288	4
135	Effect of grinding depths on SiC nanogrinding behavior based on molecular dynamics. <b>2022</b> , 128, 1	O
134	Viscosity and transport in a model fragile metallic glass. <b>2021</b> , 5,	1
133	Finding defects in disorder: Strain-dependent structural fingerprint of plasticity in granular materials. <b>2021</b> , 119, 241904	
132	Giant configurational softening controls atomic-level process of shear banding in metallic glasses. <b>2021</b> , 5,	1
131	Thickness-Dependent Mechanical Failure in Thin Films of Glassy Polymer Bidisperse Blends. <b>2022</b> , 55, 201-209	2
130	Label-free Cell Tracking Enables Collective Motion Phenotyping in Epithelial Monolayers.	
129	???????. 2022,	
128	Using Nanoindentation to Characterize the Mechanical and Creep Properties of Shale: Load and Loading Strain Rate Effects <b>2022</b> , 7, 14317-14331	O
127	Challenges and limits of mechanical stability in 3D direct laser writing <b>2022</b> , 13, 2115	5

126	A constitutive model for metallic glasses based on two-temperature nonequilibrium thermodynamics. <b>2022</b> , 154, 103309	O
125	Recent progress in the phase-field dislocation dynamics method. <b>2022</b> , 210, 111419	Ο
124	Bridging the Gap Between Atomistics and Structural Engineering. 2005, 2749-2756	
123	Atomistic Calculation of Mechanical Behavior. <b>2005</b> , 773-792	
122	Out-of-equilibrium Relaxation of a Time-dependent Effective Temperature. 2006, 129-136	
121	Local symmetry predictors of mechanical stability in glasses <b>2022</b> , 8, eabn0681	1
120	Mean-field model for the Curie-Weiss temperature dependence of coherence length in metallic liquids <i>Physical Review E</i> , <b>2022</b> , 105, 044135	
119	Extracting governing system for the plastic deformation of metallic glasses using machine learning. <b>2022</b> , 65, 1	O
118	Elastic criterion for shear-banding instability in amorphous solids <i>Physical Review E</i> , <b>2022</b> , 105, 045003 2.4	О
117	Roles of Mn content and nanovoid defects in the plastic deformation mechanism of FelMn twin crystals from molecular dynamics simulations.	1
116	Local-Average Free Volume Correlates with Dynamics in Glass Formers <b>2022</b> , 13, 3957-3964	Ο
115	Beyond the Average: Spatial and Temporal Fluctuations in Oxide Glass-Forming Systems 2022,	1
114	Power fluctuations in sheared amorphous materials: A minimal model. <i>Physical Review E</i> , <b>2022</b> , 105, 2.4	О
113	The structureproperty relationship of granular materials with different friction coefficients: Insight from machine learning. <b>2022</b> , 101759	O
112	Statistical Physics of the Yielding Transition. <b>2022</b> , 337-345	
111	Failure behavior and criteria of metallic glasses. <b>2022</b> , 38,	O
110	Microstructure Evolution in High-Pressure Phase Transformations of CrFeNi and CoCrFeMnNi Alloys. <b>2022</b> , 165383	О
109	Mechanical annealing and yielding transition in cyclically sheared binary glasses. <b>2022</b> , 590, 121697	О

108	Rheological response of a glass-forming liquid having large bidispersity.	О
107	A representation learning framework for detection and characterization of dead versus strain localization zones from pre- to post-failure. <b>2022</b> , 24,	1
106	Characterization and visualization of grain boundary disconnections. 2022, 118067	
105	Micro- and Macroscopic Aspects of the Intermittent Behaviors of Granular Materials Related by Graph Neural Network. <b>2022</b> , 111763	
104	Evolution of local densities during shear banding in Zr-based metallic glass micropillars. <b>2022</b> , 235, 118068	O
103	The atomistic mechanism of notch sensitivity on the deformation mode in metallic glasses. <b>2022</b> , 131, 225108	
102	Atomic-scale study of the mechanical properties of dual-phase fcc/bcc crystallites: influences of alloying elements and phase boundaries. <b>2022</b> , 57, 11111-11131	
101	Strain rate sensitivity of a Cu60Zr40 metallic and nanoglass. <b>2022</b> , 165991	O
100	Two-Dimensional Ultrathin Silica Films.	1
99	Hidden spatiotemporal sequence in transition to shear band in amorphous solids. <b>2022</b> , 4,	O
98	Rare events and disorder control the brittle yielding of well-annealed amorphous solids. 2022, 4,	1
97	Molecular simulation guided constitutive modeling of filled rubber: Bridging structural parameters to constitutive equations. <b>2022</b> , 254, 125090	
96	Predicting the location of shear band initiation in a metallic glass. 2022, 6,	О
95	Computational indentation in highly cross-linked polymer networks. <i>Physical Review E</i> , <b>2022</b> , 106, 2.4	
94	Putting memories on paper. <b>2022</b> , 119,	О
93	Brittle yielding in supercooled liquids below the critical temperature of mode coupling theory. <b>2022</b> , 157, 034501	O
92	Atomistic simulations of plasticity heterogeneity in gradient nano-grained FCC metals. 2022, 221, 110929	1
91	Anisotropic correlations of plasticity on the yielding of metallic glasses. <i>Physical Review E</i> , <b>2022</b> , 106,	O

90	Nonequilibrium plastic roughening of metallic glasses yields self-affine topographies with strain-rate and temperature-dependent scaling exponents. <b>2022</b> , 6,	0
89	Evaluating the predictive power of machine learning model for shear transformation in metallic glasses using metrics for an imbalanced dataset. 9,	O
88	Fracture of silicate glasses: Microcavities and correlations between atomic-level properties. <b>2022</b> , 6,	О
87	Terminal stage of highly viscous flow. <b>2022</b> , 106,	О
86	Defects controlled rejuvenation in the Zr47.5Cu47.5Al5 metallic glass. 2022, 166876	
85	Center Atom Model for Strain Mapping of Void and Crack of Atomic Lattice Image. 2100264	O
84	Synergistic Effect of Different Plastic Deformation Modes: Molecular Dynamics Study on Strength of Crystalline/Amorphous Mixed Systems. <b>2022</b> , 63, 1224-1231	
83	Transient nature of fast relaxation in metallic glass. <b>2022</b> , 239, 118254	1
82	Unravelling physical origin of the Bauschinger effect in glassy polymers. 2022, 168, 105046	O
81	Effect of medium-range ordered nanoclusters on compression deformation of Mg65Cu25Y10 metallic glasses. <b>2022</b> , 924, 166582	
80	Temperature Rise in Shear Bands and its Effect on Crystallization Behavior in Bulk Metallic Glasses.	0
79	Using Packing Defects in Heterogeneous Biological Membrane as a Lens to Explore Protein Localization Propensity and Small Molecule Permeability.	O
78	Microscopic mechanism of nanoscale shear bands in an energetic molecular crystal (田DX): A first-order structural phase transition. <b>2022</b> , 106,	O
77	Development of extended STZ model for granular soils subjected to combined static loading and vibration. 1-29	o
76	Stress overshoot, hysteresis, and the Bauschinger effect in sheared dense colloidal suspensions. <b>2022</b> , 106,	0
75	Fragility in glassy liquids: A structural approach based on machine learning. <b>2022</b> , 157, 124501	2
74	Gradient of mechanical properties in polymer nanocomposites: From atomistic scale to the strain gradient effective continuum. <b>2022</b> , 111977	О
73	Detecting Lagrangian coherent structures from sparse and noisy trajectory data. 2022, 948,	2

72	Dislocation glide driven interstitial shuffling of oxygen interstitials in titanium. 2022, 6,	O
71	History dependent plasticity of glass: a mapping between atomistic and elasto-plastic models. <b>2022</b> , 118405	О
70	Mechanical annealing and memories in a disordered solid. <b>2022</b> , 8,	1
69	Topologically close-packed structure characteristics of the plastic deformation regions of amorphous Cu64.5Zr35.5. <b>2022</b> , 21, 749-760	1
68	Characteristics and Correlations of Nonaffine Particle Displacements in the Plastic Deformation of Athermal Amorphous Materials.	0
67	Structuro-elasto-plasticity model for large deformation of disordered solids. 2022, 4,	O
66	Localized Elasticity Governs the Nonlinear Rheology of Colloidal Supercooled Liquids. 2022, 12,	O
65	Towards commonality between shear banding and glass-liquid transition in metallic glasses. <b>2022</b> , 6,	0
64	Relevance of Shear Transformations in the Relaxation of Supercooled Liquids. 2022, 129,	2
63	Fatigue fracture mechanism of amorphous materials from a density-based coarse-grained model. <b>2022</b> , 3,	O
62	Atomistic modeling of tensile deformation and fracture of carbon fibers: Nanoscales stress redistribution, effect of local structural characteristics and nanovoids. <b>2022</b> ,	0
61	Sound absorption in glasses. <b>2022</b> , 9, 100078	О
60	Mechanical size effect and serrated flow of various Zr-based bulk metallic glasses. 2022, 151, 107737	0
59	Identification of medium range order defects and their critical effect on spallation of Cu64Zr36 metallic glass. <b>2023</b> , 932, 167591	O
58	Relaxation dynamics in amorphous alloys under asymmetric cyclic shear deformation. 2023, 600, 121996	0
57	Unified description of fluids and solids in Smoothed Particle Hydrodynamics. <b>2023</b> , 439, 127579	O
56	Ultra-fast amorphization of crystalline alloys by ultrasonic vibrations. 2022,	0
55	Molecular dynamics simulation on creep-ratcheting behavior of columnar nanocrystalline aluminum. <b>2022</b> , 108376	1

54	Deformation behaviors of a model metallic glass under 3-D nanoindentation studied in molecular dynamics simulation. <b>2022</b> , 100130	0
53	Synthesis and characterization of nPCD sintered from OLC and Microdiamond.	O
52	Dislocation entangled mechanisms in cu-graphene nanocomposite fabricated by high-pressure sintering. <b>2023</b> , 195, 112524	0
51	Pinning effect on the correlations of nonaffine displacement in metallic glasses. <b>2023</b> , 601, 122052	O
50	Atomistic simulations of nanoindentation on nanoglasses: Effects of grain size and gradient microstructure on the mechanical properties. <b>2023</b> , 153, 107782	0
49	Temperature rise in shear bands and its effect on crystallization behavior in bulk metallic glasses. <b>2023</b> , 936, 168198	O
48	Universal mechanical instabilities in the energy landscape of amorphous solids: Evidence from athermal quasistatic expansion. <b>2022</b> , 106,	О
47	Vortex motion and nonlinear response in coupled noisy phase oscillator lattices under shear stress. <b>2022</b> , 106,	O
46	Molecular dynamics analysis on bending mechanical behavior of alumina nanowires at different loading rates. <b>2022</b> , 32, 3687-3698	0
45	Deformation characteristics of solid-state benzene as a step towards understanding planetary geology. <b>2022</b> , 13,	О
44	Effect of cryogenic thermal cycling on the microstructure and mechanical properties of Zr-based bulk metallic glasses. <b>2022</b> , 144513	О
43	Failure and Mechanical Properties of Glassy Diblock Copolymer Thin Films. <b>2022</b> , 55, 10880-10890	Ο
42	A regime beyond the HallPetch and inverse-HallPetch regimes in ultrafine-grained solids. 2022, 5,	0
41	Elastic interactions of plastic events in strained amorphous solids before yield. 2023, 7,	O
40	Optimal grain size distribution in gradient nano-grained nickel. <b>2023</b> , 111854	1
39	A second-order non-local model for granular flows. 11,	O
38	Creating bulk ultrastable glasses by random particle bonding. <b>2023</b> , 14,	О
37	Emergent failure transition of pearlitic steel at extremely high strain rates. <b>2023</b> , 219, 112005	O

36	Nanoindentation study on room-temperature creep behavior of Ir33Ni28Ta39 bulk metallic glass. <b>2023</b> , 603, 122132	O
35	Dipolar and quadrupolar characteristics of shear transformation in two dimensional metallic glasses. <b>2023</b> , 34, 105389	О
34	Fundamental links between shear transformation, Irelaxation, and string-like motion in metallic glasses. <b>2023</b> , 246, 118701	1
33	Investigation of Medium Range Order Defects in CuxZr100-x (x = 50, 56, 60, 64) Metallic Glasses Using Reverse Monte Carlo Modeling. <b>2023</b> , 13, 70	O
32	Fracturing in Wet Granular Media Illuminated by Photoporomechanics. 2022, 18,	O
31	Optimally rejuvenated model binary glasses. <b>2022</b> , 6,	O
30	Dynamic length scale and weakest link behavior in crystal plasticity. 2023, 7,	0
29	Molecular Mechanics of Disordered Solids.	O
28	Synthesis and mechanical properties of highly structure-controlled Zr-based metallic glasses by thermal rejuvenation technique.	O
27	Microscopic activated dynamics theory of the shear rheology and stress overshoot in ultradense glass-forming fluids and colloidal suspensions. <b>2023</b> , 67, 559-578	O
26	Physics-motivated fractional viscoelasticity model for dynamic relaxation in amorphous solids. <b>2023</b> , 164, 103588	O
25	Complex strengthening mechanisms in nanocrystalline Ni-Mo alloys revealed by a machine-learning interatomic potential. <b>2023</b> , 952, 169964	O
24	Quantitative analysis of grinding performance of cubic silicon carbide surface texture lubricated with water film. <b>2023</b> , 180, 108267	O
23	Fracture universality in amorphous nanowires. <b>2023</b> , 173, 105210	O
22	The Qualitative Difference in Flow Responses between Network-Forming Strong and Fragile Liquids. <b>2023</b> , 92,	O
21	Hidden shear bands of diversified structures in a bent heterogeneous metallic glass. <b>2023</b> , 869, 144726	O
20	The brittle-to-ductile transition in aluminosilicate glasses is driven by topological and dynamical heterogeneity. <b>2023</b> , 247, 118740	0
19	Machine-learning inspired density-fluctuation model of local structural instability in metallic glasses. <b>2023</b> , 247, 118741	1

18	Atomistic insight of torsional behavior of CNT-nanocrystalline Al nanocomposites. 2023, 134, 109768	О
17	Pt-induced atomic-level tailoring towards paracrystalline high-entropy alloy. 2023, 14,	O
16	Spatial clustering of microscopic dynamics governs the slip avalanche of sheared granular materials. <b>2023</b> , 163, 103570	0
15	World beyond the nearest neighbors. <b>2023</b> , 35, 174002	1
14	Medium-Range Order Resists Deformation in Metallic Liquids and Glasses. 2023, 13, 442	0
13	The dynamics of shear band propagation in metallic glasses. <b>2023</b> , 248, 118787	O
12	BOTAN: BOnd TArgeting Network for prediction of slow glassy dynamics by machine learning relative motion. <b>2023</b> , 158, 084503	1
11	Two slip regimes in sheared granular fault. <b>2023</b> , 608, 118086	O
10	Introduction to viscoelasticity and plasticity, and their relation to the underlying microscopic dynamics in soft matter systems. <b>2023</b> , 128653	0
9	Bridging necking and shear-banding mediated tensile failure in glasses. <b>2023</b> , 7,	O
8	Correlations of multiscale structural evolution and homogeneous flows in metallic glass ribbons. <b>2023</b> , 11, 547-555	O
7	Mechanical excitation and marginal triggering during avalanches in sheared amorphous solids. <b>2023</b> , 107,	O
6	Experimental and modelling investigation of vibration-induced fluidization in sheared granular soils.	0
5	Elasticity, Facilitation, and Dynamic Heterogeneity in Glass-Forming Liquids. 2023, 130,	O
4	The role of non-affine deformations in the elastic behavior of the cellular vertex model.	O
3	Effects of void shape and location on the fracture and plastic deformation of Cu (crystalline) /Cu64Zr36 (amorphous) composites. <b>2023</b> , 24, 4177-4189	O
2	Research progress on the shear band of metallic glasses. <b>2023</b> , 170164	O
1	Particle-based approach to the Eulerian distortion field and its dynamics.	O