# Shaoxing Qu

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 129 papers | 3,034 citations | 32 h-index | 50 g-index |
| 137 ext. papers | 4,149 ext. citations | 6.2 avg, IF | 5.84 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 129 | A hyperelastic-damage model based on the strain invariants. *Extreme Mechanics Letters*, **2022**, 52, 101641 | 3.9 | 1 |
| 128 | Fatigue life assessment and damage evolution in Z-pinned laminates. *Composites Science and Technology*, **2022**, 221, 109328 | 8.6 | 0 |
| 127 | Experimental study on the magnetic permeability of inclusion filled soft polymeric composite for soft-core transformer applications. *Polymer Testing*, **2022**, 106, 107430 | 4.5 | |
| 126 | Impact-induced bubble interactions and coalescence in soft materials. *International Journal of Solids and Structures*, **2022**, 238, 111387 | 3.1 | 0 |
| 125 | Stretch induced thermal conduction anisotropy of hydrogel. *International Journal of Heat and Mass Transfer*, **2022**, 185, 122445 | 4.9 | 0 |
| 124 | Magnetomechanical behavior of soft magnetoactive membranes. *International Journal of Solids and Structures*, **2022**, 234-235, 111310 | 3.1 | 1 |
| 123 | A versatile hydrogel network-repairing strategy achieved by the covalent-like hydrogen bond interaction.. *Science Advances*, **2022**, 8, eabl5066 | 14.3 | 8 |
| 122 | Effects of hole arrangement and trenched hole on multirow film cooling. *AIP Advances*, **2022**, 12, 045205 | 1.5 | 1 |
| 121 | S2worm: A Fast-Moving Untethered Insect-Scale Robot With 2-DoF Transmission Mechanism. *IEEE Robotics and Automation Letters*, **2022**, 7, 6758-6765 | 4.2 | 0 |
| 120 | 3D Printing of Conductive Hydrogel-Elastomer Hybrids for Stretchable Electronics. *ACS Applied Materials & Interfaces*, **2021**, | 9.5 | 2 |
| 119 | Intelligent Soft Actuators and Flexible Devices. *Advanced Intelligent Systems*, **2021**, 3, 2100173 | 6 | 0 |
| 118 | 3D Printing Method for Tough Multifunctional Particle-Based Double-Network Hydrogels. *ACS Applied Materials & Interfaces*, **2021**, 13, 13714-13723 | 9.5 | 20 |
| 117 | Self-powered soft robot in the Mariana Trench. *Nature*, **2021**, 591, 66-71 | 50.4 | 131 |
| 116 | In Situ and Intraoperative Detection of the Ureter Injury Using a Highly Sensitive Piezoresistive Sensor with a Tunable Porous Structure. *ACS Applied Materials & Interfaces*, **2021**, 13, 21669-21679 | 9.5 | 3 |
| 115 | Preface: Mechanics of soft materials and flexible structures. *Acta Mechanica Sinica/Lixue Xuebao*, **2021**, 37, 746-747 | 2 | 0 |
| 114 | Acarid Suction Cup-Inspired Rapid and Tunable Magnetic Adhesion. *Advanced Materials Technologies*, **2021**, 6, 2100004 | 6.8 | 5 |
| 113 | Mechanically Robust and UV-Curable Shape-Memory Polymers for Digital Light Processing Based 4D Printing. *Advanced Materials*, **2021**, 33, e2101298 | 24 | 38 |

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| 112 | Photoinitiator-grafted polymer chains for integrating hydrogels with various materials. *Cell Reports Physical Science*, **2021**, 2, 100463 | 6.1 | 4 |
| 111 | Ambiently and Mechanically Stable Ionogels for Soft Ionotronics. *Advanced Functional Materials*, **2021**, 31, 2102773 | 15.6 | 27 |
| 110 | A Numerical Approach Based on Finite Element Method for the Wrinkling Analysis of Dielectric Elastomer Membranes. *Journal of Applied Mechanics, Transactions ASME*, **2021**, 88, | 2.7 | 2 |
| 109 | Shape-Memory Polymers: Mechanically Robust and UV-Curable Shape-Memory Polymers for Digital Light Processing Based 4D Printing (Adv. Mater. 27/2021). *Advanced Materials*, **2021**, 33, 2170210 | 24 | |
| 108 | Hydrogel Coating Enabling Mechanically Friendly, Step-Index, Functionalized Optical Fiber. *Advanced Optical Materials*, **2021**, 9, 2101036 | 8.1 | 1 |
| 107 | Functional hydrogel coatings. *National Science Review*, **2021**, 8, nwaa254 | 10.8 | 51 |
| 106 | Micromechanical modeling of the multi-axial deformation behavior in double network hydrogels. *International Journal of Plasticity*, **2021**, 137, 102901 | 7.6 | 15 |
| 105 | 3D printing of highly stretchable hydrogel with diverse UV curable polymers. *Science Advances*, **2021**, 7, | 14.3 | 70 |
| 104 | A Mechanically Robust and Versatile Liquid-Free Ionic Conductive Elastomer. *Advanced Materials*, **2021**, 33, e2006111 | 24 | 62 |
| 103 | Low-cycle electro-mechanical fatigue of dielectric elastomers: Pure-shear experiments and life-prediction model. *International Journal of Fatigue*, **2021**, 148, 106220 | 5 | 0 |
| 102 | Peel of elastomers of various thicknesses and widths. *Extreme Mechanics Letters*, **2021**, 46, 101325 | 3.9 | 2 |
| 101 | Modeling the mechanical behaviors of multiple network elastomers. *Mechanics of Materials*, **2021**, 161, 103992 | 3.3 | 4 |
| 100 | An anisotropic constitutive model for 3D printed hydrogel-fiber composites. *Journal of the Mechanics and Physics of Solids*, **2021**, 156, 104611 | 5 | 1 |
| 99 | Essential work of fracture of soft elastomers. *Journal of the Mechanics and Physics of Solids*, **2021**, 156, 104616 | 5 | 2 |
| 98 | Study of non-uniform axial magnetic field induced deformation of a soft cylindrical magneto-active actuator. *Soft Matter*, **2021**, 17, 7498-7505 | 3.6 | 2 |
| 97 | Tunable piezoresistivity of low percolation threshold micro-nickel wires/PDMS conductive composite regulated by magnetic field. *Journal of Materials Chemistry C*, **2021**, 9, 5908-5919 | 7.1 | 3 |
| 96 | Integrated multifunctional flexible electronics based on tough supramolecular hydrogels with patterned silver nanowires. *Journal of Materials Chemistry C*, **2020**, 8, 7688-7697 | 7.1 | 22 |
| 95 | A Wearable Capacitive Sensor Based on Ring/Disk-Shaped Electrode and Porous Dielectric for Noncontact Healthcare Monitoring. *Global Challenges*, **2020**, 4, 1900079 | 4.3 | 14 |

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| 94 | A Thermochromic Hydrogel for Camouflage and Soft Display. *Advanced Optical Materials*, **2020**, 8, 200008 | 8.1 | 12 |
| 93 | Numerical study of millimeter-scale magnetorheological elastomer robot for undulatory swimming. *Journal Physics D: Applied Physics*, **2020**, 53, 235402 | 3 | 3 |
| 92 | Dual pH-Responsive Hydrogel Actuator for Lipophilic Drug Delivery. *ACS Applied Materials & Interfaces*, **2020**, 12, 12010-12017 | 9.5 | 63 |
| 91 | Highly Stretchable Bilayer Lattice Structures That Elongate via In-Plane Deformation. *Advanced Functional Materials*, **2020**, 30, 1909473 | 15.6 | 0 |
| 90 | BioARS: Designing Adaptive and Reconfigurable Bionic Assembly Robotic System with Inchworm Modules **2020**, | | 1 |
| 89 | A Review of Physically Based and Thermodynamically Based Constitutive Models for Soft Materials. *Journal of Applied Mechanics, Transactions ASME*, **2020**, 87, | 2.7 | 16 |
| 88 | An electro-mechanically coupled visco-hyperelastic-plastic constitutive model for cyclic deformation of dielectric elastomers. *Mechanics of Materials*, **2020**, 150, 103575 | 3.3 | 7 |
| 87 | Stretchable tactile sensor with high sensitivity and dynamic stability based on vertically aligned urchin-shaped nanoparticles. *Materials Today Physics*, **2020**, 14, 100219 | 8 | 9 |
| 86 | Experimental investigation on electro-mechanically coupled cyclic deformation of laterally constrained dielectric elastomer. *Polymer Testing*, **2020**, 81, 106220 | 4.5 | 5 |
| 85 | Bistable rotating mechanism based on dielectric elastomer actuator. *Smart Materials and Structures* , **2020**, 29, 015008 | 3.4 | 6 |
| 84 | Size-dependent inertial cavitation of soft materials. *Journal of the Mechanics and Physics of Solids*, **2020**, 137, 103859 | 5 | 6 |
| 83 | On the grain size dependent working hardening behaviors of severe plastic deformation processed metals. *Scripta Materialia*, **2020**, 178, 171-175 | 5.6 | 15 |
| 82 | A constitutive model for multi network elastomers pre-stretched by swelling. *Extreme Mechanics Letters*, **2020**, 40, 100926 | 3.9 | 11 |
| 81 | Intergrated Shape Memory Alloys Soft Actuators with Periodic and Inhomogeneous Deformations by Modulating Elastic Tendon Structures. *Advanced Engineering Materials*, **2020**, 22, 2000640 | 3.5 | 0 |
| 80 | Multiple mechanism based constitutive modeling of gradient nanograined material. *International Journal of Plasticity*, **2020**, 125, 314-330 | 7.6 | 45 |
| 79 | Ultrastretchable and conductive core/sheath hydrogel fibers with multifunctionality. *Journal of Polymer Science, Part B: Polymer Physics*, **2019**, 57, 272-280 | 2.6 | 15 |
| 78 | Polyacrylamide hydrogels. II. elastic dissipater. *Journal of the Mechanics and Physics of Solids*, **2019**, 133, 103737 | 5 | 40 |
| 77 | Synthesis and controlled morphology of Ni@Ag core shell nanowires with excellent catalytic efficiency and recyclability. *Nanotechnology*, **2019**, 30, 385603 | 3.4 | 3 |

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| 76 | A physically-based damage model for soft elastomeric materials with anisotropic Mullins effect. *International Journal of Solids and Structures*, **2019**, 176-177, 121-134 | 3.1 | 30 |
| 75 | Size Effect on Microbond Testing Interfacial Shear Strength of Fiber-Reinforced Composites. *Journal of Applied Mechanics, Transactions ASME*, **2019**, 86, | 2.7 | 3 |
| 74 | Highly conductive 1D-2D composite film for skin-mountable strain sensor and stretchable triboelectric nanogenerator. *Nano Energy*, **2019**, 62, 319-328 | 17.1 | 61 |
| 73 | Inclusion Size Effect on Mechanical Properties of Particle Hydrogel Composite. *Acta Mechanica Solida Sinica*, **2019**, 32, 643-651 | 2 | 5 |
| 72 | A physically based visco-hyperelastic constitutive model for soft materials. *Journal of the Mechanics and Physics of Solids*, **2019**, 128, 208-218 | 5 | 37 |
| 71 | 3D Printing of Multifunctional Hydrogels. *Advanced Functional Materials*, **2019**, 29, 1900971 | 15.6 | 114 |
| 70 | Effect of Partition on the Mechanical Behaviors of Soft Adhesive Layers. *Journal of Applied Mechanics, Transactions ASME*, **2019**, 86, | 2.7 | 6 |
| 69 | Failure of soft dielectric membrane with a hole subjected to mechanical and electric loads. *International Journal of Non-Linear Mechanics*, **2019**, 117, 103243 | 2.8 | |
| 68 | Preface to the Soft Matter Mechanics Special Issue of Acta Mechanica Solida Sinica. *Acta Mechanica Solida Sinica*, **2019**, 32, 533-534 | 2 | 1 |
| 67 | A chemo-mechanical model for fully-coupled lithiation reaction and stress generation in viscoplastic lithiated silicon. *Science China Technological Sciences*, **2019**, 62, 1365-1374 | 3.5 | 5 |
| 66 | Toward Highly Thermal Stable Perovskite Solar Cells by Rational Design of Interfacial Layer. *IScience*, **2019**, 22, 534-543 | 6.1 | 22 |
| 65 | Adhesive Tough Magnetic Hydrogels with High FeO Content. *ACS Applied Materials & Interfaces*, **2019**, 11, 10292-10300 | 9.5 | 54 |
| 64 | Electrically tunable fast and reversible structural coloration of two-dimensional photonic crystals. *Smart Materials and Structures*, **2019**, 28, 115019 | 3.4 | 5 |
| 63 | Prescribing patterns in growing tubular soft matter by initial residual stress. *Soft Matter*, **2019**, 15, 8468-8474 | 3.6 | 15 |
| 62 | Magnetic-Assisted Transparent and Flexible Percolative Composite for Highly Sensitive Piezoresistive Sensor via Hot Embossing Technology. *ACS Applied Materials & Interfaces*, **2019**, 11, 48331-48340 | 9.5 | 18 |
| 61 | Highly stretchable and transparent dielectric gels for high sensitivity tactile sensors. *Smart Materials and Structures*, **2019**, 28, 024003 | 3.4 | 3 |
| 60 | Printable Liquid-Metal@PDMS Stretchable Heater with High Stretchability and Dynamic Stability for Wearable Thermotherapy. *Advanced Materials Technologies*, **2019**, 4, 1800435 | 6.8 | 61 |
| 59 | Intrinsically Stretchable Resistive Switching Memory Enabled by Combining a Liquid Metal-Based Soft Electrode and a Metal-Organic Framework Insulator. *Advanced Electronic Materials*, **2019**, 5, 1800655 | 6.4 | 35 |

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|---|---|---|---|
| 58 | Agile and Resilient Insect-Scale Robot. *Soft Robotics*, **2019**, 6, 133-141 | 9.2 | 56 |
| 57 | X-Mechanics: An endless frontier. *Science China: Physics, Mechanics and Astronomy*, **2019**, 62, 1 | 3.6 | 15 |
| 56 | Effect of pre-stress on the onset of yielding in bulk metallic glasses. *Journal of Non-Crystalline Solids*, **2019**, 503-504, 44-51 | 3.9 | 7 |
| 55 | Analysis of ductile fracture by extended unified strength theory. *International Journal of Plasticity*, **2018**, 104, 196-213 | 7.6 | 15 |
| 54 | Bonding dissimilar polymer networks in various manufacturing processes. *Nature Communications*, **2018**, 9, 846 | 17.4 | 136 |
| 53 | Controllable synthesis of nickel nanowires and its application in high sensitivity, stretchable strain sensor for body motion sensing. *Journal of Materials Chemistry C*, **2018**, 6, 4737-4745 | 7.1 | 38 |
| 52 | A cohesive zone model incorporating a Coulomb friction law for fiber-reinforced composites. *Composites Science and Technology*, **2018**, 157, 195-201 | 8.6 | 28 |
| 51 | Puncture mechanics of soft elastomeric membrane with large deformation by rigid cylindrical indenter. *Journal of the Mechanics and Physics of Solids*, **2018**, 112, 458-471 | 5 | 14 |
| 50 | Stretch tuning of the Debye ring for 2D photonic crystals on a dielectric elastomer membrane. *Soft Matter*, **2018**, 14, 1120-1129 | 3.6 | 13 |
| 49 | A general constitutive model of soft elastomers. *Journal of the Mechanics and Physics of Solids*, **2018**, 117, 110-122 | 5 | 56 |
| 48 | Mechanical characterization and modeling of sponge-reinforced hydrogel composites under compression. *Soft Matter*, **2018**, 14, 4355-4363 | 3.6 | 8 |
| 47 | Tough and Conductive Hybrid Hydrogels Enabling Facile Patterning. *ACS Applied Materials & Interfaces*, **2018**, 10, 13685-13692 | 9.5 | 63 |
| 46 | Voltage-controlled radial wrinkles of a trumpet-like dielectric elastomer structure. *AIP Advances*, **2018**, 8, 035314 | 1.5 | 8 |
| 45 | Soft Display Using Photonic Crystals on Dielectric Elastomers. *ACS Applied Materials & Interfaces*, **2018**, 10, 24758-24766 | 9.5 | 32 |
| 44 | Indentation size effects of mechanical behavior and shear transformation zone in thin film metallic glasses. *Thin Solid Films*, **2018**, 646, 36-43 | 2.2 | 10 |
| 43 | Recent Advances in Stretchable Supercapacitors Enabled by Low-Dimensional Nanomaterials. *Small* , **2018**, 14, e1803976 | 11 | 35 |
| 42 | Design and Characterization of a Soft Dielectric Elastomer Peristaltic Pump Driven by Electromechanical Load. *IEEE/ASME Transactions on Mechatronics*, **2018**, 23, 2132-2143 | 5.5 | 18 |
| 41 | Pneumatically Actuated Soft Robotic Arm for Adaptable Grasping. *Acta Mechanica Solida Sinica*, **2018**, 31, 608-622 | 2 | 19 |

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| 40 | Numerical Study on Mechanical Properties of Discontinuously Reinforced Titanium Matrix Composite with Network Reinforcement Architecture. *International Journal of Applied Mechanics*, **2017**, 09, 1750073 | 2.4 | 9 |
| 39 | Morphology of Voltage-Triggered Ordered Wrinkles of a Dielectric Elastomer Sheet. *Journal of Applied Mechanics, Transactions ASME*, **2017**, 84, | 2.7 | 19 |
| 38 | Time-dependent shear transformation zone in thin film metallic glasses revealed by nanoindentation creep. *Journal of Alloys and Compounds*, **2017**, 696, 239-245 | 5.7 | 20 |
| 37 | Constitutive models of artificial muscles: a review. *Journal of Zhejiang University: Science A*, **2016**, 17, 22-36 | 2.1 | 16 |
| 36 | Dependence of room-temperature nanoindentation creep behavior and shear transformation zone on the glass transition temperature in bulk metallic glasses. *Journal of Non-Crystalline Solids*, **2016**, 445-446, 19-29 | 3.9 | 17 |
| 35 | Failure analysis of syntactic foams: A computational model with cohesive law and XFEM. *Composites Part B: Engineering*, **2016**, 89, 18-26 | 10 | 20 |
| 34 | Controlling wrinkles on the surface of a dielectric elastomer balloon. *Extreme Mechanics Letters*, **2016**, 9, 139-146 | 3.9 | 13 |
| 33 | Numerical investigation on the loading-delamination-unloading behavior of adhesive joints. *Composites Part A: Applied Science and Manufacturing*, **2016**, 90, 45-50 | 8.4 | 5 |
| 32 | Irreversible deformation of metal matrix composites: A study via the mechanism-based cohesive zone model. *Mechanics of Materials*, **2015**, 89, 72-84 | 3.3 | 12 |
| 31 | Dielectric elastomer peristaltic pump module with finite deformation. *Smart Materials and Structures*, **2015**, 24, 075026 | 3.4 | 26 |
| 30 | Nucleation and propagation of voltage-driven wrinkles in an inflated dielectric elastomer balloon. *Soft Matter*, **2015**, 11, 6569-75 | 3.6 | 23 |
| 29 | Strength Analysis of Syntactic Foams Using a Three-Dimensional Continuum Damage Finite Element Model. *Journal of Applied Mechanics, Transactions ASME*, **2015**, 82, | 2.7 | 4 |
| 28 | Multiscale Simulation of Damage Progression in 5-Harness Satin Weave Composites. *Jom*, **2015**, 67, 1491-1498 | 2.1 | 3 |
| 27 | Two-dimensional electron gas at the PbTiO3/SrTiO3 interface: An ab initio study. *Physical Review B*, **2015**, 92, | 3.3 | 29 |
| 26 | Enhanced Compressive Sensing of Dielectric Elastomer Sensor Using a Novel Structure. *Journal of Applied Mechanics, Transactions ASME*, **2015**, 82, | 2.7 | 23 |
| 25 | MECHANICS OF SOFT ACTIVE MATERIALS AND STRUCTURES **2015**, 85-86 | | |
| 24 | Analysis of the twin spacing and grain size effects on mechanical properties in hierarchically nanotwinned face-centered cubic metals based on a mechanism-based plasticity model. *Journal of the Mechanics and Physics of Solids*, **2015**, 76, 162-179 | 5 | 59 |
| 23 | Enhanced plasticity in Zr□uAgAlBe bulk metallic glasses. *Journal of Non-Crystalline Solids*, **2015**, 412, 35-44 | 3.9 | 12 |

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| 22 | EFFECTS OF STRETCHING RATE AND SIZE ON THE RUPTURE OF ACRYLIC DIELECTRIC ELASTOMER. *International Journal of Applied Mechanics*, **2014**, 06, 1450026 | 2.4 | 4 |
| 21 | A jogged dislocation governed strengthening mechanism in nanotwinned metals. *Nano Letters*, **2014**, 14, 5075-80 | 11.5 | 74 |
| 20 | Non-localized deformation in metallic alloys with amorphous structure. *Acta Materialia*, **2014**, 68, 32-41 | 8.4 | 54 |
| 19 | Prestretch effect on snap-through instability of short-length tubular elastomeric balloons under inflation. *International Journal of Solids and Structures*, **2014**, 51, 2109-2115 | 3.1 | 40 |
| 18 | Electromechanical Bistable Behavior of a Novel Dielectric Elastomer Actuator. *Journal of Applied Mechanics, Transactions ASME*, **2014**, 81, | 2.7 | 33 |
| 17 | Phase transitions in metastable phases of silicon. *Journal of Applied Physics*, **2014**, 115, 103514 | 2.5 | 23 |
| 16 | Effects of hollow particle shape and distribution on the elastic properties of syntactic foams: 3D computational modeling. *Computational Materials Science*, **2014**, 95, 106-112 | 3.2 | 7 |
| 15 | Strain localization and fatigue cracking behaviors of Cu bicrystal with an inclined twin boundary. *Acta Materialia*, **2014**, 73, 167-176 | 8.4 | 31 |
| 14 | Effects of load configuration on partial slip contact between an elastic?plastic sphere and a rigid flat. *Tribology International*, **2013**, 61, 120-128 | 4.9 | 10 |
| 13 | Elastic moduli of polycrystalline Li15Si4 produced in lithium ion batteries. *Journal of Power Sources*, **2013**, 242, 732-735 | 8.9 | 33 |
| 12 | An atomistic investigation of structural evolution in metallic glass matrix composites. *International Journal of Plasticity*, **2013**, 44, 147-160 | 7.6 | 81 |
| 11 | Stress-state-dependent deformation behavior in NiNb metallic glassy film. *Acta Materialia*, **2012**, 60, 4136-4143 | 8.4 | 31 |
| 10 | Electromechanical and dynamic analyses of tunable dielectric elastomer resonator. *International Journal of Solids and Structures*, **2012**, 49, 3754-3761 | 3.1 | 106 |
| 9 | Energy harvesting of dielectric elastomer generators concerning inhomogeneous fields and viscoelastic deformation. *Journal of Applied Physics*, **2012**, 112, 034119 | 2.5 | 54 |
| 8 | A finite element method for dielectric elastomer transducers. *Acta Mechanica Solida Sinica*, **2012**, 25, 459-466 | 2 | 37 |
| 7 | Rate dependent stress-stretch relation of dielectric elastomers subjected to pure shear like loading and electric field. *Acta Mechanica Solida Sinica*, **2012**, 25, 542-549 | 2 | 22 |
| 6 | Effect of structural relaxation on plastic flow in a NiNb metallic glassy film. *Acta Materialia*, **2012**, 60, 3667-3676 | 8.4 | 32 |
| 5 | Can nanoscale twin boundaries serve as dislocation sources in single crystals?. *Computational Materials Science*, **2011**, 50, 1567-1570 | 3.2 | 12 |

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| 4 | Electromechanical coupling properties and stability analysis of ferroelectrets. *Journal of Applied Physics*, **2011**, 110, 043525 | 2.5 | 7 |
| 3 | Hardening by twin boundary during nanoindentation in nanocrystals. *Nanotechnology*, **2010**, 21, 335704 | 3.4 | 26 |
| 2 | Effect of pre-existing shear bands on the tensile mechanical properties of a bulk metallic glass. *Acta Materialia*, **2010**, 58, 1276-1292 | 8.4 | 103 |
| 1 | A quantitative analysis for the stress field around an elastoplastic indentation/contact. *Journal of Materials Research*, **2009**, 24, 704-718 | 2.5 | 30 |