Direct mechanical measurement of the tensile strength and elastic modulus of multiwalled carbon nanotubes

DOI: 10.1016/s0921-5093(01)01807-x
Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 334, 173-178.

#	Paper	IF	Citations
890	Carbon Nanostructures. **2002**, 27, 227-356		647
889	Nanomaterials: on the Mechanics of Nanomaterials. **2003**, 39, 1271-1293		59
888	Carbon nanotube fracture differences between quantum mechanical mechanisms and those of empirical potentials. **2003**, 382, 133-141		78
887	A review on polymer nanofibers by electrospinning and their applications in nanocomposites. **2003**, 63, 2223-2253		5915
886	Direct Observation of the Mechanical Properties of Single-Walled Carbon Nanotubes and Their Junctions at the Atomic Level. **2003**, 3, 751-755		135
885	The Effects of O2 Adsorbates on Field Emission Properties of Single-Wall Carbon Nanotubes: A Density Functional Theory Study. **2003**, 3, 1209-1214		35
884	Bond-breaking bifurcation states in carbon nanotube fracture. **2003**, 118, 9485-9488		101
883	Comparative theoretical study of single-wall carbon and boron-nitride nanotubes. **2003**, 67,		128
882	Science and Technology of the Twenty-First Century: Synthesis, Properties, and Applications of Carbon Nanotubes. **2003**, 33, 419-501		773
881	Would Diamond Nanorods Be Stronger than Fullerene Nanotubes?. **2003**, 3, 805-809		76
880	Hypothetical silicon nanotubes under axial compression. *Nanotechnology*, **2003**, 14, 402-408	3.4	25
879	Strain-rate and temperature dependent plastic yield in carbon nanotubes from ab initio calculations. **2004**, 84, 2775-2777		62
878	Realization of nanoscale resolution with a micromachined thermally actuated testing stage. **2004**, 75, 2154-2162		41
877	Carbon nanotube surface chemistry and its effects on interfacial nanomechanics. **2004**, 858, 260		1
876	Surface characteristics and wetting behavior of carbon nanotubes. **2004**, 858, 209		1
875	Fundamental Mechanical Properties of Carbon Nanotubes: Current Understanding and the Related Experimental Studies. **2004**, 126, 271-278		95
874	Mechanical behavior of individual WS2 nanotubes. **2004**, 19, 454-459		102

873	Local elastic properties of carbon nanotubes in the presence of Stone-Wales defects. **2004**, 69,		150
872	Prediction of elastic properties for single-walled carbon nanotubes. *Carbon*, **2004**, 42, 39-45	10.4	135
871	Simulation of Young's modulus of single-walled carbon nanotubes by molecular dynamics. **2004**, 352, 156-163		184
870	On the effective elastic moduli of carbon nanotubes for nanocomposite structures. *Composites Part B: Engineering*, **2004**, 35, 95-101	10	157
869	Mechanical behavior of functionalized nanotubes. **2004**, 387, 247-252		63
868	The role of vacancy defects and holes in the fracture of carbon nanotubes. **2004**, 390, 413-420		300
867	Introduction to Carbon Nanotubes. **2004**, 39-98		6
866	SWNT and MWNT Reinforced Carbon Nanocomposite Fibrils. **2004**,		1
865	Carbon nanotube polymer composites. **2004**, 8, 31-37		693
864	Synthesis and characterization of multi-walled carbon nanotubes reinforced polyamide 6 via in situ polymerization. *Polymer*, **2005**, 46, 5125-5132	3.9	193
863	The role of atomistic simulations in probing the small-scale aspects of fracture□ case study on a single-walled carbon nanotube. **2005**, 72, 2037-2071		57
862	X-ray diffraction of multiwalled carbon nanotube under high pressure: Structural durability on static compression. *Carbon*, **2005**, 43, 519-523	10.4	28
861	Nanocomposites in context. **2005**, 65, 491-516		1273
860	Effect of randomly occurring Stone□Wales defects on mechanical properties of carbon nanotubes using atomistic simulation. *Nanotechnology*, **2005**, 16, 555-566	3.4	94
859	Modelling heat transfer of carbon nanotubes. **2005**, 13, 893-902		14
858	Preparation of Homogeneously Dispersed Multiwalled Carbon Nanotube/Polystyrene Nanocomposites via Melt Extrusion Using Trialkyl Imidazolium Compatibilizer. **2005**, 15, 910-916		198
857	Structural dependence of nonlinear elastic properties for carbon nanotubes using a continuum analysis. **2005**, 80, 1463-1468		15
856	Frictional anisotropy of oriented carbon nanotube surfaces. **2005**, 18, 59-62		124

855	Multiwalled carbon nanotube/polymer nanocomposites: Processing and properties. **2005**, 43, 1186-1197		72
854	Comparison of the properties of waterborne polyurethane/multiwalled carbon nanotube and acid-treated multiwalled carbon nanotube composites prepared by in situ polymerization. **2005**, 43, 3973-3985		141
853	A method to evaluate the tensile strength and stress-strain relationship of carbon nanofibers, carbon nanotubes, and C-chains. **2005**, 1, 640-4		15
852	Test Bed for Mechanical Characterization of Nanowires. **2005**, 219, 57-65		3
851	Direct contact buckling of electrochemically grown gold nanowires. **2005**, 87, 173112		8
850	Scaling law in carbon nanotube electromechanical devices. **2005**, 95, 185504		32
849	In situ tensile testing of nanoscale freestanding thin films inside a transmission electron microscope. **2005**, 20, 1769-1777		76
848	Nanomechanical properties of silica-coated multiwall carbon nanotubes-poly(methyl methacrylate) composites. **2005**, 21, 3146-52		91
847	Static buckling and actuation of free-standing mesoscale beams. **2005**, 4, 655-659		8
846	52nd Hatfield Memorial Lecture Large chunks of very strong steel. **2005**, 21, 1293-1302		111
845	Vertically aligned carbon nanofibers and related structures: Controlled synthesis and directed assembly. **2005**, 97, 041301		534
844	Multiscale Model to Study the Effect of Interfaces in Carbon Nanotube-Based Composites. **2005**, 127, 222-232		94
843	Mechanics of defects in carbon nanotubes: Atomistic and multiscale simulations. **2005**, 71,		205
842	Mechanical properties of connected carbon nanorings via molecular dynamics simulation. **2005**, 72,		54
841	Tensile and Compressive Behavior of Carbon Nanotubes: Effect of Functionalization and Topological Defects. *Mechanics of Advanced Materials and Structures*, **2006**, 13, 115-127	1.8	12
840	Scaled-up production of multi-walled carbon nanotubes using catalytic chemical vapour deposition. **2006**,		
839	On the mechanical behavior of WS2 nanotubes under axial tension and compression. **2006**, 103, 523-8		233
838	Mechanical Characterization of a Single Nanofiber. **2006**, 121-137		2

837	Nonlinear stick-spiral model for predicting mechanical behavior of single-walled carbon nanotubes. **2006**, 74,		54
836	A comparison of different methods of Young's modulus determination for single-wall carbon nanotubes (SWCNT) using molecular dynamics (MD) simulations. **2006**, 38, 271-281		76
835	Conceptual Modelling of Damping of CNT-Reinforced Materials. **2006**, 1		
834	Magnetorheology of Multiwalled Carbon Nanotube Mineral Dispersions. **2006**, 919		
833	Tearing, folding and deformation of a carbon–carbon sp2-bonded network. *Carbon*, **2006**, 44, 1544-1547	10.4	21
832	A critical review on nanotube and nanotube/nanoclay related polymer composite materials. *Composites Part B: Engineering*, **2006**, 37, 425-436	10	392
831	Reinforcement mechanisms in MWCNT-filled polycarbonate. **2006**, 66, 1162-1173		280
830	Prediction of Young's modulus of single wall carbon nanotubes by molecular-mechanics based finite element modelling. **2006**, 66, 1597-1605		245
829	Role of atomic scale interfaces in the compressive behavior of carbon nanotubes in composites. **2006**, 66, 2030-2038		29
828	Efficient coating of N-doped carbon nanotubes with polystyrene using atomic transfer radical polymerization. **2006**, 419, 567-573		50
827	Preparation of carbon nanotubes over cobalt-containing catalysts via catalytic decomposition of methane. **2006**, 426, 345-350		55
826	Structural and mechanical properties of polymer nanocomposites. **2006**, 53, 73-197		1093
825	Ultra-strong gel-spun UHMWPE fibers reinforced using multiwalled carbon nanotubes. *Polymer*, **2006**, 47, 1604-1611	3.9	169
824	Large deformation mechanical behavior of flexible nanofiber filled polymer nanocomposites. *Polymer*, **2006**, 47, 2802-2812	3.9	56
823	Stability of the aqueous suspensions of nanotubes in the presence of nonionic surfactant. **2006**, 299, 740-6		90
822	Load transfer issues in the tensile and compressive behavior of multiwall carbon nanotubes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2006**, 429, 66-73	5.3	45
821	Specific features of the strength of carbon whiskers. **2006**, 32, 837-839		5
820	Mechanical compliance of photolithographically defined vertically aligned carbon nanotube turf. **2006**, 41, 7872-7878		71

819	Mechanical characterization of nanofibers □A review. **2006**, 66, 1102-1111		219
818	On the effective thermal conductivity of carbon nanotube reinforced polymer composites. **2006**, 66, 1703-1712		91
817	The effect of multi-walled carbon nanotubes on the molecular orientation of poly(vinyl alcohol) in drawn composite films. **2006**, 7, 323-327		19
816	Pseudoreinforcement effect of multiwalled carbon nanotubes in epoxy matrix composites. **2006**, 102, 3664-3672		26
815	Augmentation of acrylic bone cement with multiwall carbon nanotubes. **2006**, 77, 269-76		74
814	Fracture Transitions at a Carbon-Nanotube/Polymer Interface. **2006**, 18, 83-87		140
813	High-Strength Mats from Electrospun Poly(p-Phenylene Biphenyltetracarboximide) Nanofibers. **2006**, 18, 668-671		139
812	Sustained Growth of Ultralong Carbon Nanotube Arrays for Fiber Spinning. **2006**, 18, 3160-3163		307
811	Fracture resistance of zigzag single walled carbon nanotubes. *Nanotechnology*, **2006**, 17, 1323-1332	3.4	17
810	Fabrication and Mechanical Properties of MWNTs/Phenolic Nanocomposites. **2006**, 505-507, 121-126		7
809	Symmetry-, time-, and temperature-dependent strength of carbon nanotubes. **2006**, 103, 6105-9		208
808	Kink formation and motion in carbon nanotubes at high temperatures. **2006**, 97, 075501		70
807	Carbon nanotubes as nanoelectromechanical systems components. **2006**, 361-488		1
806	Atomic Simulation of Structure and Deformation's Influence on the Mechanical Properties of Single-walled Carbon Nanotubes. **2006**, 19, 294-300		2
805	Theoretical prediction of stress-induced phase transformations of the second kind in graphene. **2006**, 73,		8
804	Atomic geometry and energetics of carbon nanotube necking. **2007**, 87, 567-574		13
803	Nonlinear resonance in a three-terminal carbon nanotube resonator. *Nanotechnology*, **2007**, 18, 195203	3.4	13
802	Atomistic Failure Mechanism of Single Wall Carbon Nanotubes with Small Diameters. **2007**, 24, 165-168		7

801	Deformation of isolated single-wall carbon nanotubes in electrospun polymer nanofibres. *Nanotechnology*, **2007**, 18, 235707	3.4	58
800	Hyperelastic behavior of single wall carbon nanotubes. **2007**, 101, 064316		3
799	Finite element modeling of single-walled carbon nanotubes with introducing a new wall thickness. **2007**, 61, 497-502		16
798	Dispersion of carbon nanotubes (CNTs) in aluminum powder. **2007**, 38, 646-650		342
797	Developing the mechanical models for nanomaterials. **2007**, 38, 1234-1250		64
796	Nanoscale fracture mechanics. **2007**, 58, 185-209		36
795	Ab initio calculation of ideal strength and phonon instability of graphene under tension. **2007**, 76,		1042
794	Carbon Nanotube Polymer Composites: Recent Developments in Mechanical Properties. **2007**, 585-598		4
793	High-performance carbon nanotube fiber. **2007**, 318, 1892-5		830
792	Electron beam machining of nanometer-sized tips from multiwalled boron nitride nanotubes. **2007**, 102, 024310		19
791	Mechanical Characteristics of FIB Deposited Carbon Nanowires Using an Electrostatic Actuated Nano Tensile Testing Device. **2007**, 16, 191-201		49
790	Effect of Environmental Temperatures on Elastic Properties of Single-Walled Carbon Nanotube. **2007**, 30, 1195-1210		31
789	Enhanced ductile behavior of tensile-elongated individual double-walled and triple-walled carbon nanotubes at high temperatures. **2007**, 98, 185501		51
788	A carbon nanotube field effect transistor with a suspended nanotube gate. **2007**, 7, 2291-4		17
787	Buckling and kinking force measurements on individual multiwalled carbon nanotubes. **2007**, 76,		40
786	An electro-active shape memory fibre by incorporating multi-walled carbon nanotubes. **2007**, 16, 830-836		46
785	Dynamics and Vibration Damping Behavior of Advanced Meso/Nanoparticle-Reinforced Composites. *Mechanics of Advanced Materials and Structures*, **2007**, 14, 603-617	1.8	6
784	Fabrication of Carbon Nanotube Reinforced Aluminum Composite by Powder Extrusion Process. **2007**, 54, 627-634		1

783	Characterization of Geoinspired and Synthetic Chrysotile Nanotubes by Atomic Force Microscopy and Transmission Electron Microscopy. **2007**, 17, 3332-3338		46
782	Viscoelastic behavior and electrical properties of flexible nanofiber filled polymer nanocomposites. Influence of processing conditions. **2007**, 67, 829-839		162
781	Mechanical properties of high density polyethylene/carbon nanotube composites. **2007**, 67, 3071-3077		340
780	The effects of extensive pitting on the mechanical properties of carbon nanotubes. **2007**, 446, 128-132		23
779	Theoretical studies on the charge-induced failure of single-walled carbon nanotubes. *Carbon*, **2007**, 45, 922-930	10.4	30
778	Molecular mechanics modeling of carbon nanotube fracture. *Carbon*, **2007**, 45, 1769-1776	10.4	86
777	Characterization of SWCNT and PAN/SWCNT films. *Carbon*, **2007**, 45, 2417-2423	10.4	13
776	Buckling and axially compressive properties of perfect and defective single-walled carbon nanotubes. *Carbon*, **2007**, 45, 2486-2495	10.4	51
775	A molecular-mechanics based finite element model for strength prediction of single wall carbon nanotubes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 454-455, 170-177	5.3	42
774	Reversible high capacity nanocomposite anodes of Si/C/SWNTs for rechargeable Li-ion batteries. **2007**, 172, 650-658		93
773	Mechanical properties of ZnO nanowires. *Sensors and Actuators A: Physical*, **2007**, 134, 169-176	3.9	162
772	Carbon nanotubes □becoming clean. **2007**, 10, 28-35		253
771	Strong carbon-nanotube fibers spun from long carbon-nanotube arrays. **2007**, 3, 244-8		330
770	Study of thermal and mechanical properties of composites based on arc-grown carbon nanotubes and heat-resistant cyanoether binder. **2007**, 49, 702-707		5
769	Effect of mechanical alloying time and carbon nanotube (CNT) content on the evolution of aluminum (Al)□CNT composite powders. **2007**, 42, 4954-4959		130
768	Mechanical Properties of WS2 Nanotubes. **2007**, 18, 549-563		48
767	The influence of the matrix polarity on the morphology and properties of ethylene vinyl acetate copolymers□arbon nanotube nanocomposites. **2007**, 67, 1659-1665		42
766	Dynamic elastic modulus of single-walled carbon nanotubes in different thermal environments. **2007**, 365, 144-148		27

765	Bending buckling of single-walled carbon nanotubes by atomic-scale finite element. *Composites Part B: Engineering*, **2008**, 39, 202-208	10	35
764	Influence of twin-screw extrusion conditions on the dispersion of multi-walled carbon nanotubes in a poly(lactic acid) matrix. *Polymer*, **2008**, 49, 3500-3509	3.9	345
763	In situ TEM measurements of the mechanical properties and behavior of WS2 nanotubes. **2008**, 1, 22-31		48
762	Single-walled carbon-nanotube networks on large-area glass substrate by the dip-coating method. **2008**, 4, 2255-61		67
761	Mechanical properties of triple composites of polycarbonate, single-walled carbon nanotubes and carbon fibres. **2008**, 40, 2434-2439		30
760	Thermal sensitive shape recovery and mass transfer properties of polyurethane/modified MWNT composite membranes synthesized via in situ solution pre-polymerization. **2008**, 319, 102-110		43
759	Influence of injection molding parameters on the electrical resistivity of polycarbonate filled with multi-walled carbon nanotubes. **2008**, 68, 777-789		147
758	Removal of entrapped iron compounds from isothermally treated catalytic chemical vapor deposition derived multi-walled carbon nanotubes. *Carbon*, **2008**, 46, 391-396	10.4	18
757	Fabrication and mechanical properties of multi-walled carbon nanotubes/epoxy nanocomposites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2008**, 483-484, 289-292	5.3	86
756	Measurement of the elastic properties and intrinsic strength of monolayer graphene. **2008**, 321, 385-8		14811
755	Electrospun nanofiber belts made from high performance copolyimide. *Nanotechnology*, **2008**, 19, 015604	3.4	46
754	Effect of Long Multi-walled Carbon Nanotubes on Delamination Toughness of Laminated Composites. **2008**, 42, 5-23		47
753	The effect of two neighboring defects on the mechanical properties of carbon nanotubes. *Nanotechnology*, **2008**, 19, 065703	3.4	13
752	Theoretical Studies of the Interaction of an Open-Ended Boron Nitride Nanotube (BNNT) with Gas Molecules. **2008**, 112, 20206-20211		36
751	Micromechanics Modeling of Polymer Nanocomposites for Use as Multifunctional Materials. **2008**,		2
750	Molecular dynamics (MD) simulations of the dependence of C□ bond lengths and bond angles on the tensile strain in single-wall carbon nanotubes (SWCNT). **2008**, 41, 450-456		29
749	Density functional calculations of response of single-walled armchair carbon nanotubes to axial tension. **2008**, 41, 486-492		17
748	Synthesis and Elastic Characterization of Zinc Oxide Nanowires. **2008**, 2008, 1-7		29

747	Carbon nanotubes as interconnects: Emerging technology and potential reliability issues. **2008**,		1
746	Elastic properties and morphology of individual carbon nanofibers. *ACS Nano*, **2008**, 2, 1230-6	16.7	62
745	From Fulleranes and Icosahedral Diamondoids to Polyicosahedral Nanowires: Structural, Electronic, and Mechanical Characteristics. **2008**, 112, 11122-11129		10
744	A Micromechanics Model for the Thermal Conductivity of Nanotube-Polymer Nanocomposites. **2008**, 75,		29
743	Magnetorheology of Single-walled Carbon Nanotube Dispersions in Mineral Oil. **2008**, 19, 1143-1152		7
742	The quest for stronger, tougher materials. **2008**, 320, 448; author reply 448		23
741	Effect of nanotube-nanotube coupling on the radial breathing mode of carbon nanotubes. **2008**, 78,		8
740	Strength at the Interface of CNT Films Made by Surface Decomposition of SiC. **2008**, 3, 352-355		2
739	SYNTHESIS AND CHARACTERIZATION OF CARBON NANOTUBES REINFORCED POLYMER NANOCOMPOSITES. **2009**, 08, 237-242		2
738	Geometry-Dependent Nonlinear Decrease of the Effective Young's Modulus of Single-walled Carbon Nanotubes Submitted to Large Tensile Loadings. **2009**, 17, 1-10		12
737	Unbinding force of chemical bonds and tensile strength in strong crystals. **2009**, 21, 485405		18
736	Scale and twist effects on the strength of nanostructured yarns and reinforced composites. *Nanotechnology*, **2009**, 20, 485702	3.4	30
735	Effect of Temperature on Elastic Properties of Single-Walled Carbon Nanotubes. **2009**, 28, 551-569		14
734	Stretching behavior of a carbon nanowire encapsulated in a carbon nanotube. **2009**, 60, 129-132		10
733	Multifunctional Composites of Ceramics and Single-Walled Carbon Nanotubes. **2009**, 21, 1767-1770		97
732	Macroscopic single-walled-carbon-nanotube fiber self-assembled by dip-coating method. **2009**, 21, 4357-61		36
731	Wedge test of carbon-nanotube-reinforced epoxy adhesive joints. **2009**, 111, 2957-2962		31
730	Processing and characterization of nanostructured Cu-carbon nanotube composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 523, 60-64	5.3	76

729	Theoretical study of the P-Ylide reaction in the carbon nanotube. **2009**, 52, 1969-1972		3
728	Dispersion of multiwalled carbon nanotubes in aluminum powders. **2009**, 28, 175-180		14
727	Carbon nanotube capsules encapsulating SnO2 nanoparticles as an anode material for lithium ion batteries. **2009**, 55, 521-527		56
726	Mesomechanics of multiwall carbon nanotubes and nanowhiskers. **2009**, 12, 38-53		13
725	Computation of the loading diagram and the tensile strength of carbon nanotube networks. *Carbon* , **2009**, 47, 1327-1334	10.4	16
724	Thermally activated model for tensile yielding of pristine single-walled carbon nanotubes with nonlinear elastic deformation. *Carbon*, **2009**, 47, 2070-2076	10.4	9
723	The reduction of carbon nanotube (CNT) length during the manufacture of CNT/polymer composites and a method to simultaneously determine the resulting CNT and interfacial strengths. *Carbon*, **2009**, 47, 3192-3200	10.4	95
722	A first-principles study on the elastic properties of single-walled carbon nanotubesg. **2009**, 223, 163-168		2
721	Can carbon nanotubes play a role in the field of nuclear waste management?. **2009**, 43, 1250-5		80
720	Optical absorption and thermal transport of individual suspended carbon nanotube bundles. **2009**, 9, 590-4		63
719	Effect of surface energy on tensile deformation of nanotubes. **2009**, 42, 165410		6
718	A Micromechanics Model for the Electrical Conductivity of Nanotube-Polymer Nanocomposites. **2009**, 43, 917-941		141
717	Tensile Loading of Double-Walled and Triple-Walled Carbon Nanotubes and their Mechanical Properties. **2009**, 113, 17002-17005		41
716	A review of shape memory polymer composites and blends. **2009**, 40, 1661-1672		432
715	Carbon Nanotube Reinforced Conductors for Flexible Electronics. **2009**, 5, 232-235		7
714	Multi-Walled Carbon Nanotubes Grown from Chemical Vapor: Links between Atomic near Range Order and Growth Parameters. **2009**, 113, 4307-4314		10
713	Synthesis of high purity multi-walled carbon nanotubes over Co-Mo/MgO catalyst by the catalytic chemical vapor deposition of methane. **2009**, 24, 119-123		47
712	Carbon Nanotubes, Multi-Walled. **2009**,		

711	Effect of Processing Conditions on the Morphology and Properties of Polymer Nanocomposites. 369-405		1
710	Stick-Spiral Model for Studying Mechanical Properties of Carbon Nanotubes. **2010**, 297-322		
709	Properties, synthesis, and growth mechanisms of carbon nanotubes with special focus on thermal chemical vapor deposition. **2010**, 2, 1306-23		209
708	Dispersion control and characterization in multiwalled carbon nanotube and phenylethynyl-terminated imide composites. **2010**, 70, 822-828		15
707	A new technique for dispersion of carbon nanotube in a metal melt. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 5335-5340	5.3	65
706	Atomistic-based continuum modeling of the nonlinear behavior of carbon nanotubes. **2010**, 212, 167-179		58
705	Formation and conversion of carbon nanostructures under radiation. **2010**, 83, 849-862		5
704	Tensile tests on individual single-walled carbon nanotubes: linking nanotube strength with its defects. **2010**, 22, 4071-5		61
703	Model schematics of carbon-nanotube-based-nanomechanical-tuner using piezoelectric strain. **2010**, 42, 1995-1999		12
702	High accuracy curve fits for chirality, length and diameter dependent initial modulus of single walled carbon nanotubes. **2010**, 43, 252-255		5
701	Ultra-strength materials. **2010**, 55, 710-757		595
700	Multiscale computations for carbon nanotubes based on a hybrid QM/QC (quantum mechanical and quasicontinuum) approach. **2010**, 58, 86-102		9
699	Computational investigation of the electronic and structural properties of ultra small-diameter boron nitride nanotubes. **2010**, 405, 2542-2544		12
698	Dispersion of carbon nanotubes in hydroxyapatite powder by in situ chemical vapor deposition. **2010**, 166, 19-23		23
697	Synthesis and characterization of two dimensional graphene lamellae based PAn nanocomposites. **2010**, 519, 1059-1065		8
696	Wear characteristic of aluminum-based composites containing multi-walled carbon nanotubes. **2010**, 270, 12-18		128
695	Enhancement of delamination fatigue resistance in carbon nanotube reinforced glass fiber/polymer composites. **2010**, 70, 901-908		48
694	Comparative MD simulation study on the mechanical properties of a zigzag single-walled carbon nanotube in the presence of Stone-Thrower-Wales defects. **2010**, 92, 1701-1705		15

693	Mechanical performance of highly compressible multi-walled carbon nanotube columns with hyperboloid geometries. *Carbon*, **2010**, 48, 145-152	10.4	24
692	Tuning array morphology for high-strength carbon-nanotube fibers. **2010**, 6, 132-7		74
691	Nanowires with Unimaginable Characteristics. **2010**,		1
690	Advances in nanoparticle reinforcement in structural adhesives. **2010**, 151-182		8
689	Carbon Nanotubes: A Solution for Processing Smart Biomaterials. **2010**, 441, 3-29		4
688	A Note on Reinforcement of Polymer Matrix Composites Using Carbon Residues Derived From Woody Biomass. **2010**, 44, 1883-1892		0
687	Chemistry of Soluble Carbon Nanotubes: Fundamentals and Applications. **2010**, 301-331		
686	MEMS for In Situ Testing□Handling, Actuation, Loading, and Displacement Measurements. **2010**, 35, 375-381		66
685	A MEMS tensile testing device for mechanical characterization of individual nanowires. **2010**,		1
684	Nanostructured hybrid silicon/carbon nanotube heterostructures: reversible high-capacity lithium-ion anodes. *ACS Nano*, **2010**, 4, 2233-41	16.7	460
683	Microscopic and Spectroscopic Studies of Thermally Enhanced Electrospun PMMA Micro- and Nanofibers. **2010**, 1, 866-869		16
682	Modified embedded atom method study of the mechanical properties of carbon nanotube reinforced nickel composites. **2010**, 81,		26
681	Carbon nanotube yarn and 3-D braid composites. Part I: Tensile testing and mechanical properties analysis. **2010**, 41, 230-237		50
680	Internal field emission and conductivity relaxation in carbon nanofiber filled polymer system. **2010**, 160, 2085-2088		7
679	Introduction to Carbon Nanotubes. **2010**, 47-118		13
678	Characterization and Spark Plasma Sintering of Mechanically Milled Aluminum-Carbon Nanotube (CNT) Composite Powders. **2010**, 44, 1991-2003		35
677	Effect of nitrogen doping on the mechanical properties of carbon nanotubes. *ACS Nano*, **2010**, 4, 7637-43	16.7	54
676	Micro Device for Mechanical Evaluation of Axi-symmetric Nanometric Samples: A Feasibility Study. **2010**,		

675	Influence of odd and even number of Stone–Wales defects on the fracture behaviour of an armchair single-walled carbon nanotube under axial and torsional strain. **2010**, 36, 409-417		8
674	In situ SEM observation of column-like and foam-like CNT array nanoindentation. **2011**, 3, 648-53		59
673	Comprehension of Nanocomposites. **2011**, 777-819		2
672	Three dimensional carbon-nanotube polymers. *ACS Nano*, **2011**, 5, 7226-34	16.7	94
671	Joining carbon nanotubes. **2011**, 3, 4503-14		25
670	Lithiation-induced embrittlement of multiwalled carbon nanotubes. *ACS Nano*, **2011**, 5, 7245-53	16.7	109
669	Adhesives with Nanoparticles. **2011**, 1437-1460		7
668	Molecular Dynamics Simulation of Elastic Properties and Fracture Behavior of Single Wall Carbon Nanotubes with Vacancy and Stone–Wales Defect. **2011**, 20, 29-38		2
667	Elastic modulus of multiwalled carbon nanotubes reinforced aluminium matrix nanocomposite – A theoretical approach. **2011**, 50, 2493-2495		33
666	Effect of CNTs growth on carbon fibers on the tensile strength of CNTs grown carbon fiber-reinforced polymer matrix composites. **2011**, 42, 8-15		122
665	The role of nanomaterials in redox-based supercapacitors for next generation energy storage devices. **2011**, 3, 839-55		681
664	Dependence of mechanical characteristics and the fracture and buckling behavior of single-walled carbon nanotubes on their geometry. **2011**, 26, 408-416		8
663	Spectro-Microscopic Study of Laser-Modified Carbon Nanotubes. **2011**,		
662	Carbon Nanotubes, Multi-Walled. **2011**,		
661	Adhesive and Mechanical Properties of Carbon Nanotube Probes Contacting Chemically-Treated Surfaces. **2011**,		1
660	Multi-Walled Carbon Nanotube-Aluminum Matrix Composites Prepared by Combination of Hetero-Agglomeration Method, Spark Plasma Sintering and Hot Extrusion. **2011**, 52, 1960-1965		54
659	Fabrication of Carbon Nanotube Reinforced Aluminum Matrix Composite by Spark Plasma Sintering and Hot Extrusion Hybrid Process. **2011**, 75, 259-264		2
658	Carbon nanotubes as structural material and their application in composites. *Composites Part B: Engineering*, **2011**, 42, 2151-2157	10	47

657	Mechanical properties of aligned multi-walled carbon nanotube/epoxy composites processed using a hot-melt prepreg method. **2011**, 71, 1826-1833		101
656	Phonons in graphene with point defects. **2011**, 23, 015402		25
655	Responses and thermal conductivity measurements of multi-wall carbon nanotube (MWNT)/epoxy composites. **2011**, 103, 533-542		11
654	High strength electrospun fibers. **2011**, 22, 295-303		23
653	Properties of carbon nanotube reinforced linear low density polyethylene nanocomposites fabricated by cryogenic ball-milling. **2011**, 32, 2101-2109		13
652	Effects of carbon nanofibers on the fracture, mechanical, and thermal properties of PP/SEBS-g-MA blends. **2011**, 51, 948-958		24
651	Superstrong ultralong carbon nanotubes for mechanical energy storage. **2011**, 23, 3387-91		148
650	Silicon□Carbon Nanotube Coaxial Sponge as Li-Ion Anodes with High Areal Capacity. **2011**, 1, 523-527		206
649	TEM observations of buckling and fracture modes for compressed thick multiwall carbon nanotubes. *Carbon*, **2011**, 49, 206-213	10.4	26
648	The performance of superhydrophobic and superoleophilic carbon nanotube meshes in water□oil filtration. *Carbon*, **2011**, 49, 669-676	10.4	254
647	High-temperature vapor deposition polymerization polyimide coating for elimination of surface nano-flaws in high-strength carbon fiber. *Carbon*, **2011**, 49, 3881-3890	10.4	24
646	Direct measurements of interfacial shear strength of multi-walled carbon nanotube/PEEK composite using a nano-pullout method. **2011**, 71, 1295-1300		102
645	Investigation of temperature effect on the mechanical properties of single-walled carbon nanotubes. **2011**, 93, 2208-2212		31
644	Anisotropic carbon nanotube papers fabricated from multiwalled carbon nanotube webs. *Carbon*, **2011**, 49, 2437-2443	10.4	118
643	Buckling initiation and displacement dependence in compression of vertically aligned carbon nanotube arrays. *Carbon*, **2011**, 49, 3190-3199	10.4	51
642	Computational study of the effect of carbon vacancy defects on the Young's modulus of (6, 6) single wall carbon nanotube. **2011**, 176, 693-700		15
641	Tensile Strength of Spinnable Multiwall Carbon Nanotubes. **2011**, 10, 2572-2578		32
640	Investigation of the Resistance Dependence on Temperature of Single Carbon Nanotube in Different Environments. *Japanese Journal of Applied Physics*, **2011**, 50, 125101	1.4	1

639	Mechanical Properties and Applications of Carbon Nanotubes. **2011**, 295-297, 1516-1521		1
638	Mechanical properties of polymer–polymer-grafted carbon nanotube composites. **2011**, 347-375		2
637	Thermomechanical and rheological behaviour of polymer nanocomposites based on ethylene–ethyl acrylate (EMA) and multiwalled carbon nanotube (MWNT). **2011**, 40, 213-222		3
636	Influence of maleic anhydride compatibiliser on properties of polpropylene/multiwalled carbon nanotube composites. **2011**, 40, 438-448		4
635	Thermoplastic natural rubber composites reinforced with OMMT, MWNTs, and hybrid OMMT–MWNTs. **2011**, 30, 1745-1752		12
634	Synthesis, Properties, and Applications of Low-Dimensional Carbon-Related Nanomaterials. **2011**, 2011, 1-21		73
633	Quantitative in situ TEM tensile testing of an individual nickel nanowire. *Nanotechnology*, **2011**, 22, 355702	3.4	57
632	Joint strength measurements of individual fiber-fiber bonds: an atomic force microscopy based method. **2012**, 83, 073902		25
631	On Design of Metal-Matrix Composites Lighter than Air. **2012**, 736, 55-71		
630	Loading Simulations of Carbon Nanotube Junctions. **2012**, 729, 162-168		
629	Chapter 9.2:Drug Delivery Strategies for Bone Regeneration. **2012**, 526-547		
628	Temperature dependent elastic constants and ultimate strength of graphene and graphyne. **2012**, 137, 194901		76
627	Micro- and Nanofibrillar Single Polymer Composites. **2012**, 641-672		2
626	THE ROLE OF POTENTIAL FUNCTIONS IN THE MECHANICAL BEHAVIOR OF THE SINGLE WALL CARBON NANOTUBES. **2012**, 11, 1240009		1
625	WITHDRAWN: Electronic structure and electron transmission of axial deformed single-wall carbon nanotube. **2012**,		
624	Hot extruded carbon nanotube reinforced aluminum matrix composite materials. *Nanotechnology*, **2012**, 23, 415701	3.4	63
623	The effect of surface modification with carbon nanotubes upon the tensile strength and Weibull modulus of carbon fibers. **2012**, 47, 8044-8051		26
622	The effect of interfacial shear strength on damping behavior of carbon nanotube reinforced composites. **2012**, 49, 3823-3837		41

621	A molecular dynamics simulation study for the mechanical properties of different types of carbon nanotubes. **2012**, 2, 377-383		2
620	Carbon nanotube formation using zeolite template and applications. **2012**, 1, 179-193		17
619	On the dynamic stability of embedded single-walled carbon nanotubes including thermal environment effects. **2012**, 19, 919-925		29
618	In situ TEM investigation of congruent phase transition and structural evolution of nanostructured silicon/carbon anode for lithium ion batteries. **2012**, 12, 1624-32		222
617	PECVD growth of carbon nanotubes: From experiment to simulation. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2012**, 30, 030803	1.3	39
616	DFT Studies on the Interaction of an Open-Ended Single-Walled Aluminum Nitride Nanotube (AlNNT) with Gas Molecules. **2012**, 116, 4957-4964		28
615	Ceramic pore channels with inducted carbon nanotubes for removing oil from water. **2012**, 4, 1909-18		83
614	Twistable and bendable actuator: a CNT/polymer sandwich structure driven by thermal gradient. *Nanotechnology*, **2012**, 23, 075501	3.4	39
613	Predictive Mechanical Properties of EPON 862 (DGEBF) cross-linked with Curing Agent W (DETDA) and SWCNT using MD Simulations - Effect of Carbon Vacancy Defects. **2012**,		3
612	Coupled molecular/continuum mechanical modeling of graphene sheets. **2012**, 45, 151-161		13
611	Fabrication of Microscale Carbon Nanotube Fibers. **2012**, 2012, 1-10		6
610	An accurate spring-mass model for predicting mechanical properties of single-walled carbon nanotubes. **2012**, 62, 6-11		13
609	The effect of milling conditions on microstructures and mechanical properties of Al/MWCNT composites. **2012**, 43, 1061-1072		114
608	Functionalized Carbon Nanotubes and Their Enhanced Polymers. **2012**, 439-478		4
607	High-pressure behaviors of carbon nanotubes. **2012**, 34, 371-385		22
606	Introduction. **2012**, 1-52		
605	A novel apparatus for in situ compression of submicron structures and particles in a high resolution SEM. **2012**, 83, 095105		33
604	Significantly reinforced composite fibers electrospun from silk fibroin/carbon nanotube aqueous solutions. **2012**, 13, 2859-67		67

603	A damage mechanics model for twisted carbon nanotube fibers. **2012**, 25, 342-347		8
602	Carbon nanotube fibers for advanced composites. **2012**, 15, 302-310		87
601	Molecular simulations of pristine and defective carbon nanotubes under monotonic and combined loading. **2012**, 65, 133-143		18
600	Developing accelerometer based on graphene nanoribbon resonators. **2012**, 376, 3248-3255		21
599	Flammability properties of PEEK and carbon nanotube composites. **2012**, 97, 2492-2502		32
598	Dispersibility and chemical bonds between multi-walled carbon nanotubes and poly(ether ether ketone) in nanocomposite fibers. **2012**, 135, 948-956		4
597	Adhesive Properties of Gecko-Inspired Mimetic via Micropatterned Carbon Nanotube Forests. **2012** , 116, 20047-20053		43
596	Characterizing Micro and Nanomaterials Using MEMS Technology. **2012**, 1		
595	Electromechanical response and failure behaviour of aerogel-spun carbon nanotube fibres under tensile loading. **2012**, 22, 6792		37
594	Theoretical study on the oxidation of zigzag silicon carbide nanotubes (SiCNTs) by singlet O2. **2012**, 407, 4238-4243		1
593	Carbon Nanotube Polymer Composites. **2012**, 1		3
592	Unzipped multiwalled carbon nanotube oxide/multiwalled carbon nanotube hybrids for polymer reinforcement. **2012**, 4, 5956-65		44
591	Sandwich-lithiation and longitudinal crack in amorphous silicon coated on carbon nanofibers. *ACS Nano*, **2012**, 6, 9158-67	16.7	65
590	Theoretical Prediction of Tensile Behavior of Single-Walled Carbon Nanotubes. **2012**, 8, 42-46		2
589	Properties of a composite prepared using a concentrate of carbon nanotubes in polyethylene. **2012** , 48, 47-56		6
588	Theoretical Study of the Mechanical Behavior of Individual TiS2 and MoS2 Nanotubes. **2012**, 116, 11714-11721		98
587	In Situ TEM Experiments of Electrochemical Lithiation and Delithiation of Individual Nanostructures. **2012**, 2, 722-741		315
586	Unusual Reversible Photomechanical Actuation in Polymer/Nanotube Composites. **2012**, 124, 8648-8652		13

585	Unusual reversible photomechanical actuation in polymer/nanotube composites. **2012**, 51, 8520-4		101
584	Preparation and characterization of silicon monoxide/graphite/carbon nanotubes composite as anode for lithium-ion batteries. **2012**, 16, 1453-1460		47
583	Characterization and mechanical testing of alumina-based nanocomposites reinforced with niobium and/or carbon nanotubes fabricated by spark plasma sintering. **2012**, 60, 622-632		52
582	Mechanical characterization of aligned multi-walled carbon nanotube films using microfabricated resonators. *Carbon*, **2012**, 50, 347-355	10.4	41
581	Mechanical properties and morphology of papers prepared from single-walled carbon nanotubes functionalized with aromatic amides. *Carbon*, **2012**, 50, 1713-1719	10.4	30
580	Mechanical reinforcement of a high-performance aluminium alloy AA5083 with homogeneously dispersed multi-walled carbon nanotubes. *Carbon*, **2012**, 50, 2264-2272	10.4	83
579	Failure mechanisms of carbon nanotube fibers under different strain rates. *Carbon*, **2012**, 50, 2887-2893	10.4	63
578	Impact of nanotube density and alignment on the elastic modulus near the top and base surfaces of aligned multi-walled carbon nanotube films. *Carbon*, **2012**, 50, 3789-3798	10.4	42
577	Physical properties of carbon nanotube sheets drawn from nanotube arrays. *Carbon*, **2012**, 50, 4175-4183	10.4	63
576	Fabrication and mechanical properties of carbon nanotube yarns spun from ultra-long multi-walled carbon nanotube arrays. *Carbon*, **2012**, 50, 4579-4587	10.4	68
575	Wave propagation in single-walled carbon nanotube under longitudinal magnetic field using nonlocal EulerBernoulli beam theory. **2012**, 36, 4529-4538		128
574	Mechanical properties of nanostructured Al2024MWCNT composite prepared by optimized mechanical milling and hot pressing methods. **2012**, 23, 205-210		53
573	Reinforcement effects of MWCNT and VGCF in bulk composites and interlayer of CFRP laminates. *Composites Part B: Engineering*, **2012**, 43, 3-9	10	56
572	Effect of matrix glass transition on reinforcement efficiency of epoxy-matrix composites with single walled carbon nanotubes, multi-walled carbon nanotubes, carbon nanofibers and graphite. *Composites Part B: Engineering*, **2012**, 43, 2079-2086	10	47
571	Modeling the effect of statistical variations in length and diameter of randomly oriented CNTs on the properties of CNT reinforced nanocomposites. *Composites Part B: Engineering*, **2012**, 43, 1756-1762	10	30
570	Fabrication of multi-walled carbon nanotube-reinforced carbon fiber/silicon carbide composites by polymer infiltration and pyrolysis process. **2012**, 72, 461-466		17
569	On the aspect ratio effect of multi-walled carbon nanotube reinforcements on the mechanical properties of cementitious nanocomposites. *Construction and Building Materials*, **2012**, 35, 647-655	6.7	233
568	Network behavior of thermosetting polyimide/multiwalled carbon nanotube composites. *Polymer*, **2012**, 53, 1020-1027	3.9	25

567	Peculiarities of Raman spectra of polyurethane/carbon nanotube composite. **2012**, 85, 1		13
566	Templated growth of covalently bonded three-dimensional carbon nanotube networks originated from graphene. **2012**, 24, 1576-81		34
565	Preparation of CNT-hybridized carbon fiber by aerosol-assisted chemical vapor deposition. **2012**, 47, 3327-3333		13
564	Compounding of MWCNTs with PS in a Twin-Screw Extruder with Varying Process Parameters: Morphology, Interfacial Behavior, Thermal Stability, Rheology, and Volume Resistivity. **2013**, 298, 89-105		28
563	An accurate molecular mechanics model for computation of size-dependent elastic properties of armchair and zigzag single-walled carbon nanotubes. **2013**, 48, 1355-1367		28
562	A composite index to quantify dispersion of carbon nanotubes in polymer-based composite materials. *Composites Part B: Engineering*, **2013**, 55, 16-21	10	39
561	An investigation of Mode I and Mode II fracture toughness enhancement using aligned carbon nanotubes forests at the crack interface. **2013**, 106, 65-73		68
560	Oxidation of nanodiamonds and modulation of their assembly in polymer-based nanohybrids by field-inducement. **2013**, 48, 4151-4162		9
559	Microwave absorption property of aligned MWCNT/Fe3O4. **2013**, 346, 186-191		46
558	The structural and electronic properties of (10,0) zigzag Single-Wall Carbon Nanotubes modified by thiophene groups. **2013**, 584, 177-181		2
557	Prediction of compressive post-buckling behavior of single-walled carbon nanotubes in thermal environments. **2013**, 113, 145-153		11
556	The application of chiral arginine and multi-walled carbon nanotubes as matrices to monitor hydrogen peroxide. **2013**, 91, 32-6		10
555	Biologically Responsive Biomaterials for Tissue Engineering. **2013**,		7
554	Effect of Metal Impurities on the Tensile Strength of Carbon Nanotubes: A Theoretical Study. **2013**, 117, 5470-5474		7
553	Recent progress in the development and properties of novel metal matrix nanocomposites reinforced with carbon nanotubes and graphene nanosheets. **2013**, 74, 281-350		711
552	Developing high-performance aluminum matrix composites with directionally aligned carbon nanotubes by combining friction stir processing and subsequent rolling. *Carbon*, **2013**, 62, 35-42	10.4	107
551	Deformation response of conformally coated carbon nanotube forest. *Nanotechnology*, **2013**, 24, 475707	3.4	8
550	Compressed carbon nanotubes: a family of new multifunctional carbon allotropes. **2013**, 3, 1331		73

549	Reinforcement of CVD grown multi-walled carbon nanotubes by high temperature annealing. **2013**, 3, 112101		14
548	Structural Nanocomposites. **2013**,		8
547	Aligned carbon nanotube/polymer composite film with anisotropic tribological behavior. **2013**, 395, 322-5		9
546	Probing structure and strain transfer in dry-spun carbon nanotube fibers by depth-profiled Raman spectroscopy. **2013**, 103, 031912		18
545	Using various techniques to characterize oxidative functionalized and aminosilanized carbon nanotubes for polyamide matrix. **2013**, 32, 75-86		38
544	Functional polymer□olymer/carbon nanotube bi-component fibers. *Polymer*, **2013**, 54, 6210-6217	3.9	26
543	Influence of additives of carbon nanotubes on the structure and properties of metal binders for a diamond tool. **2013**, 54, 527-531		5
542	Strengthening and stiffening carbon fiber epoxy composites by halloysite nanotubes, carbon nanotubes and silicon carbide whiskers. **2013**, 83-84, 375-382		13
541	A review on potential applications of carbon nanotubes in marine current turbines. **2013**, 28, 331-339		29
540	Electrical Conductivity and Hardness Property of CNTs/Epoxy Nanocomposites. **2013**, 701, 197-201		3
539	Environmentally friendly nanofillers as reinforcements for composites. **2013**, 41-73		
538	Direct conversion of natural gas into COx-free hydrogen and MWCNTs over commercial Ni□Mo/Al2O3 catalyst: Effect of reaction parameters. **2013**, 22, 27-34		22
537	Nanoscopic observations for evaluating the failure process of aligned multi-walled carbon nanotube/epoxy composites. **2013**, 88, 48-56		18
536	Reversible switching between hydrophobicity and oleophobicity of polyelectrolyte-functionalized multiwalled carbon nanotubes via counterion exchange. **2013**, 37, 810		5
535	Rheological and mechanical properties of carbon nanotube/Graphite/SS316L/polypropylene nanocomposite for a conductive polymer composite. *Composites Part B: Engineering*, **2013**, 50, 54-61	10	33
534	High-strength composite yarns derived from oxygen plasma modified super-aligned carbon nanotube arrays. **2013**, 6, 208-215		32
533	Optical visualization of individual ultralong carbon nanotubes by chemical vapour deposition of titanium dioxide nanoparticles. **2013**, 4, 1727		54
532	Liberation of drugs from multi-wall carbon nanotube carriers. **2013**, 169, 126-40		37

531	The influence of foam morphology of multi-walled carbon nanotubes/poly(methyl methacrylate) nanocomposites on electrical conductivity. *Polymer*, **2013**, 54, 3261-3270	3.9	77
530	Multi-walled carbon nanotube-based carbon/carbon composites with three-dimensional network structures. **2013**, 5, 6181-6		20
529	Carbon Nanotubes in Acrylic Bone Cement. **2013**, 173-199		
528	Interface effects on the viscoelastic characteristics of carbon nanotube polymer matrix composites. **2013**, 58, 1-11		78
527	Vapor grown carbon nanofiber reinforced bio-based polyester for electroactive shape memory performance. **2013**, 75, 15-21		75
526	Enhanced mechanical strength and electrical conductivity of carbon-nanotube/TiC hybrid fibers. **2013**, 5, 6923-7		7
525	Tailoring oxidation of Al particles morphologically controlled by carbon nanotubes. **2013**, 55, 1143-1151		10
524	Effect of functionalization of multi-walled carbon nanotube on the curing behavior and mechanical property of multi-walled carbon nanotube/epoxy composites. **2013**, 49, 279-284		83
523	Structure changes during tensile deformation and mechanical properties of a twisted carbon nanotube yarn. *Carbon*, **2013**, 60, 193-201	10.4	17
522	Individual boron nanowire has ultra-high specific Young's modulus and fracture strength as revealed by in situ transmission electron microscopy. *ACS Nano*, **2013**, 7, 10112-20	16.7	27
521	Nanoscale damping characteristics of boron nitride nanotubes and carbon nanotubes reinforced polymer composites. **2013**, 5, 12052-7		81
520	Lithiation induced corrosive fracture in defective carbon nanotubes. **2013**, 103, 153901		25
519	Enhancement in ballistic performance of composite hard armor through carbon nanotubes. **2013**, 4, 212-228		18
518	In situ experimental mechanics of nanomaterials at the atomic scale. **2013**, 5, e40-e40		96
517	Polymeric Materials Reinforced with Multiwall Carbon Nanotubes: A Constitutive Material Model. *Materials*, **2013**, 6, 2873-2891	3.5	4
516	Mechanical Properties and Fracture Characterization of Al-5%wtMg Composite Reinforced with Carbon Nanotube. **2013**, 750-752, 186-190		
515	Thermoplastic Nanocomposites with Carbon Nanotubes. **2013**, 19-60		20
514	Synthesis of single-walled carbon nanotubes over CoMo/Al 2 O 3 catalyst by the catalytic chemical vapor deposition of methane. **2013**, 4, 035018		2

513	Shape memory polymers with novel functions: electro-active, magnetically-active, light-adaptive and phase change materials. **2013**, 231-258	2
512	Polyolefins: 50 years after Ziegler and Natta II. **2013**,	11
511	Polyolefin Nanocomposites and Hybrid Catalysts. **2013**, 279-309	16
510	An enhanced continuum modeling of the ideal strength and the angle of twist in tensile behavior of single-walled carbon nanotubes. **2013**, 114, 053521	7
509	Ring windings from single-wall carbon nanotubes: A distinct element method study. **2013**, 103, 183902	10
508	BACK MATTER. **2013**, 497-556	
507	Mechanical Properties of Aligned Carbon Nanotube/Epoxy Composites. **2013**, 39, 240-247	4
506	What holds paper together: nanometre scale exploration of bonding between paper fibres. **2013**, 3, 2432	47
505	Characterization and Morphology of Modified Multi-Walled Carbon Nanotubes Filled Thermoplastic Natural Rubber (TPNR) Composite. **2013**,	4
504	The role of the atomic force function in molecular mechanics simulations for carbon nanostructures. **2013**, 47, 012035	
503	Free vibration analysis of DWCNTs using CDM and Rayleigh-Schmidt based on Nonlocal Euler-Bernoulli beam theory. **2014**, 2014, 194529	6
502	Tensile Properties and Fracture Behavior of Different Carbon Nanotube-Grafted Polyacrylonitrile-Based Carbon Fibers. **2014**, 23, 3916-3925	8
501	Synthesis and Characterization of Nanostructured Copolymer-Grafted Multiwalled Carbon Nanotube Composite Thermoplastic Elastomers toward Unique Morphology and Strongly Enhanced Mechanical Properties. **2014**, 53, 20154-20167	16
500	Properties of Carbon Nanotubes. **2014**, 1-49	2
499	Single-Walled Carbon Nanotubes: Field Emission Properties. **2014**, 4505-4511	
498	Fundamental Properties of Graphene. **2014**, 1-37	3
497	Defect-Tolerant Nanocomposites through Bio-Inspired Stiffness Modulation. **2014**, 24, 2883-2891	23
496	A probability model for the strength of carbon nanotubes. **2014**, 4, 077116	1

495	Stress transfer efficiency in aligned multi-wall carbon nanotubes sheet/epoxy composites. **2014**, 67, 16-21		15
494	Study of growth kinetics of amorphous carbon nanopillars formed by PECVD. **2014**,		
493	Polyamide-grafted-multi-walled carbon nanotube electrospun nanofibers/epoxy composites. **2014**, 15, 2564-2571		20
492	Free-standing carbon nanotube composite sensing skin for distributed strain sensing in structures. **2014**,		2
491	Nanofins: Science. *SpringerBriefs in Applied Sciences and Technology*, **2014**, 23-50	0.4	
490	Mechanical Properties of Carbon Nanotubes and Graphene. **2014**, 165-200		3
489	Synthesis and Properties of Ultralong Carbon Nanotubes. **2014**, 87-136		4
488	Direct Dry Spinning of Millimeter-long Carbon Nanotube Arrays for Aligned Sheet and Yarn. **2014**, 389-414		1
487	Barrier, mechanical and morpho-structural properties of gelatin films with carbon nanotubes addition. **2014**, 120, 223-232		28
486	A study on high-performance poly(azo-pyridine-benzophenone-imide) nanocomposites via self-reinforcement of electrospun nanofibers. **2014**, 23, 127-136		8
485	Poly(azo-ether-imide) nanocomposite films reinforced with nanofibers electrospun from multi-walled carbon nanotube filled poly(azo-ether-imide). **2014**, 30, 266-283		8
484	Combined effect of expanded graphite and multiwall carbon nanotubes on the thermo mechanical, morphological as well as electrical conductivity of in situ bulk polymerized polystyrene composites. **2014**, 56, 181-191		35
483	Synergetic effect of graphene nanoplatelets (GNPs) and multi-walled carbon nanotube (MW-CNTs) on mechanical properties of pure magnesium. **2014**, 603, 111-118		158
482	Polypropylene/carbon nanotube nano/microcellular structures with high dielectric permittivity, low dielectric loss, and low percolation threshold. *Carbon*, **2014**, 71, 206-217	10.4	290
481	Fluoroplastic–Multi-Walled Carbon Nanotube Composites: Structural, Mechanical, and Tribotechnical Characteristics. **2014**, 52, 620-631		2
480	Carbon (Graphene/Graphite). **2014**, 7-235		13
479	Structural and electronic properties of armchair (7, 7) carbon nanotubes using DFT. **2014**, 82, 159-164		21
478	Waviness reduces effective modulus of carbon nanotube forests by several orders of magnitude. *Carbon*, **2014**, 66, 57-66	10.4	44

477	Spinning of carbon nanotube fibres using the floating catalyst high temperature route: purity issues and the critical role of sulphur. **2014**, 173, 47-65		89
476	Hierarchical orthorhombic V2O5 hollow nanospheres as high performance cathode materials for sodium-ion batteries. **2014**, 2, 11185		132
475	Key factors limiting carbon nanotube yarn strength: exploring processing-structure-property relationships. *ACS Nano*, **2014**, 8, 11454-66	16.7	56
474	Imaging, Spectroscopic, Mechanical and Biocompatibility Studies of Electrospun Tecoflex EG 80A Nanofibers and Composites Thereof Containing Multiwalled Carbon Nanotubes. **2014**, 321, 205-213		15
473	Fast preparation of free-standing nanohydroxyapatite-vertically aligned carbon nanotube scaffolds. **2014**, 2, 1196-1204		25
472	Characterization of Interlayer Sliding Deformation for Individual Multiwalled Carbon Nanotubes Using Electrostatically Actuated Nanotensile Testing Device. **2014**, 23, 944-954		5
471	Enhancement of tensile and thermal properties of epoxy nanocomposites through chemical hybridization of carbon nanotubes and alumina. **2014**, 66, 109-116		53
470	Combination of carbon nitride and carbon nanotubes: synergistic catalysts for energy conversion. **2014**, 7, 2303-9		71
469	The effect of carbon nanotube orientation on erosive wear resistance of CNT-epoxy based composites. *Carbon*, **2014**, 73, 421-431	10.4	30
468	Angled microfiber arrays as low-modulus, low Poisson's ratio compliant substrates. **2014**, 24, 065016		1
467	Evaluation of mechanical properties of untwisted carbon nanotube yarn for application to composite materials. *Carbon*, **2014**, 78, 356-365	10.4	33
466	Electrospun, non-woven, nanofibrous membranes prepared from nano-diamond and multi-walled carbon nanotube-filled poly(azo-pyridine) and epoxy composites reinforced with these membranes. **2014**, 30, 369-387		12
465	Functionalized carbon nanotube reinforced scaffolds for bone regenerative engineering: fabrication, in vitro and in vivo evaluation. **2014**, 9, 035001		70
464	Influence of the concentration and nature of carbon nanotubes on the mechanical properties of AA5083 aluminium alloy matrix composites. *Carbon*, **2014**, 77, 44-52	10.4	51
463	Molecular dynamics simulations of the effect of the volume fraction on unidirectional polyimide–carbon nanotube nanocomposites. *Carbon*, **2014**, 67, 440-448	10.4	35
462	Powder metallurgy of Mg–1%Al–1%Sn alloy reinforced with low content of graphene nanoplatelets (GNPs). **2014**, 20, 4250-4255		118
461	Binary salt of hexane-1,6-diaminium adipate and carbon nanotubate as a synthetic precursor of carbon nanotube/Nylon-6,6 hybrid materials. **2014**, 35, 523-529		4
460	Carbon nanotubes leading the way forward in new generation 3D tissue engineering. **2014**, 32, 1000-14		109

459	Carbon nanotube reinforced PVAm/PVA blend FSC nanocomposite membrane for CO2/CH4 separation. **2014**, 26, 127-134		74
458	Three dimensional orientation angle distribution counting and calculation for the mechanical properties of aligned carbon nanotube/epoxy composites. **2014**, 65, 1-9		22
457	Advanced Microscopy Techniques for a Better Understanding of the Polymer/Nanotube Composite Properties. **2014**, 365-404		1
456	Refractory Metals, Ceramics, and Composites for High-Temperature Structural and Functional Applications. **2014**, 39-68		1
455	Magnesium Matrix Composites Reinforced with Graphene Nanoplatelets. **2015**, 151-189		3
454	Effects of uniaxial and biaxial orientation on fiber percolation in conductive polymer composites. **2015**,		8
453	Stack growth of aligned multiwalled carbon nanotubes using floating catalyst chemical vapor deposition technique. **2015**, 625, 53-57		1
452	Multi-walled carbon nanotubes change morpho-functional and GABA characteristics of mouse cortical astrocytes. **2015**, 13, 92		7
451	Effect of Amide Functionalization and Precuring on Tensile Properties of MWCNT/Epoxy Nanocomposites. **2015**, 353, 88-95		2
450	Thermal Transport in Single-Walled Carbon Nanotubes Under Pure Bending. **2015**, 3,		17
449	Towards nanoreliability of CNT-based sensor applications: Investigations of CNT-metal interfaces combining molecular dynamics simulations, advanced in situ experiments and analytics. **2015**,		0
448	Dispersion of carbon nanotubes into polyethylene by an additive assisted one-step melt mixing approach. *Polymer*, **2015**, 66, 210-221	3.9	22
447	Restriction of Phase Transformation in Carbon Nanotube-Reinforced Yttria-Stabilized Zirconia. **2015**, 46, 2965-2974		13
446	Optimization of AlSi CNTs functionally graded material composites for engine piston rings. **2015**, 80, 163-173		40
445	Molecular dynamics and atomistic based continuum studies of the interfacial behavior of nanoreinforced epoxy. **2015**, 85, 38-46		18
444	Effects of carbon nanotube aspect ratio on strengthening and tribological behavior of ultra high molecular weight polyethylene composite. **2015**, 76, 62-72		64
443	Nanocomposite toughness, strength and stiffness: role of filler geometry. **2015**, 1, 3-17		33
442	Dynamic stability analysis of embedded multi-walled carbon nanotubes in thermal environment. **2015**, 28, 659-667		28

441	Influence of carbon nanotube addition on sliding wear behaviour of pulse electrodeposited cobalt (Co)–phosphorus (P) coatings. **2015**, 120, 1653-1658		6
440	Experiments and FE simulation for twin screw mixing of nanocomposite of polypropylene/multi-walled carbon nanotubes. **2015**, 107, 169-176		6
439	Nanocomposite coatings: thermal spray processing, microstructure and performance. **2015**, 60, 195-244		45
438	Effects of nitrogen doping from pyrolyzed ionic liquid in carbon nanotube fibers: enhanced mechanical and electrical properties. *Nanotechnology*, **2015**, 26, 075706	3.4	11
437	Distinct element method for multiscale modeling of cross-linked carbon nanotube bundles: From soft to strong nanomaterials. **2015**, 30, 19-25		11
436	Micromechanics of ultra-toughened electrospun PMMA/PEO fibres as revealed by in-situ tensile testing in an electron microscope. **2014**, 4, 6335		28
435	Tailoring Industrial Scale CNT Production to Specialty Markets. **2015**, 1752, 103-109		12
434	In situelectron microscopy of Braille microsystems: photo-actuation of ethylene vinyl acetate/carbon nanotube composites. **2015**, 2, 025601		3
433	A numerical study on carbon nanotube pullout to understand its bridging effect in carbon nanotube reinforced composites. *Composites Part B: Engineering*, **2015**, 81, 64-71	10	34
432	Improving flexural and dielectric properties of MWCNT/epoxy nanocomposites by introducing advanced hybrid filler system. **2015**, 132, 50-64		39
431	Chemical Bath Deposition of Aluminum Oxide Buffer on Curved Surfaces for Growing Aligned Carbon Nanotube Arrays. **2015**, 31, 7401-9		9
430	Green chemical functionalization of single-wall carbon nanotube with methylimidazolium dicyanamid ionic liquid: A first principle computational exploration. **2015**, 211, 498-505		13
429	One-dimensional nonlocal elasticity for tensile single-walled carbon nanotubes: A molecular structural mechanics characterization. **2015**, 54, 160-170		33
428	Fabrication, characterization, and mechanical properties of spark plasma sintered Al–BN nanoparticle composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 642, 104-112	5.3	61
427	Improved microstructure and mechanical properties for Sn58Bi solder alloy by addition of Ni-coated carbon nanotubes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 642, 7-15	5.3	42
426	Design, simulation and characterization of a MEMS inertia switch with flexible CNTs/Cu composite array layer between electrodes for prolonging contact time. **2015**, 25, 085012		9
425	Mechanical characterization and validation of poly (methyl methacrylate)/multi walled carbon nanotube composite for the polycentric knee joint. **2015**, 50, 33-42		8
424	Loaded sectioned space elevator. **2015**, 53, 230-236		2

423	Theoretical investigations of sp–sp2 hybridized capped graphyne nanotubes. **2015**, 134, 217-221		12
422	Multifunctionalized Carbon Nanotubes Polymer Composites: Properties and Applications. **2015**, 155-214		7
421	Effect of manufacturing condition in PC/PMMA/CNT nanocomposites extrusion on the electrical, morphological, and mechanical properties. **2015**, 27, 55-62		12
420	Encapsulation of fluoroethanols in pristine and Stone–Wales defect boron nitride nanotube – A DFT study. **2015**, 345, 369-378		7
419	Omnidirectionally stretchable, high performance supercapacitors based on a graphene–carbon-nanotube layered structure. **2015**, 15, 33-42		35
418	Recent advancement of nanostructured carbon for energy applications. **2015**, 115, 5159-223		598
417	Carbon Nanotube Fabric Cooling System for Firefighters and First Responders: Modeling and Simulation. **2015**, 8, 1-12		5
416	Carbon Nanotube Uptake Changes the Biomechanical Properties of Human Lung Epithelial Cells in a Time-dependent Manner. **2015**, 3, 3983-3992		17
415	Hierarchical Composites Containing Carbon Nanotubes. **2015**, 319-356		
414	Effect of a carbon nanotube coating on friction and impact performance of Kevlar. **2015**, 50, 5431-5442		28
413	Energetics of atomic scale structure changes in graphene. **2015**, 44, 3143-76		102
412	Improved mechanical properties of magnesium–graphene composites with copper–graphene hybrids. **2015**, 31, 1452-1461		42
411	Thermal Conductivity and Phonon Scattering in Severely Bent Carbon Nanotubes and Bi-layer Graphene. **2015**, 2, 3819-3823		4
410	Advanced multifunctional properties of aligned carbon nanotube-epoxy thin film composites. **2015**, 87, 600-605		30
409	Spontaneous and specific myogenic differentiation of human mesenchymal stem cells on polyethylene glycol-linked multi-walled carbon nanotube films for skeletal muscle engineering. **2015**, 7, 18239-49		25
408	Aligned carbon nanotube reinforced polymeric scaffolds with electrical cues for neural tissue regeneration. *Carbon*, **2015**, 95, 715-724	10.4	67
407	The Hitchhiker's Guide to the Solar System: A Tethered Orbit Insertion and Landing Concept for Small Body Exploration. **2015**,		1
406	Influence of Carboxylation on Structural and Mechanical Properties of Carbon Nanotubes: Composite Reinforcement and Toxicity Reduction Perspectives. **2015**, 119, 26734-26746		16

405	Copper-CNT Hybrid TSVs: Thermo-Mechanical Stresses and Reliability Analysis. **2015**, 24, 1550006		5
404	High resolution and dynamic imaging of biopersistence and bioreactivity of extra and intracellular MWNTs exposed to microglial cells. **2015**, 70, 57-70		27
403	Highly aligned arrays of super resilient carbon nanotubes by steam purification. *Carbon*, **2015**, 84, 130-137	10.4	24
402	Graphene oxide/polyamide 6 nanocomposites produced via in situ polymerization. **2015**, 28, 372-389		29
401	Perspectives of Nano-Carbon Based Engineering Materials. **2015**, 17, 124-137		46
400	Graphene and carbon nanotube (CNT) in MEMS/NEMS applications. **2015**, 132, 192-206		146
399	Electromechanical vibration of carbon nanocoils. *Carbon*, **2015**, 81, 758-766	10.4	22
398	Carbon Nanotube Reinforced Titanium Metal Matrix Composites Prepared by Powder Metallurgy: A Review. **2015**, 40, 38-55		98
397	Optimisation and analysis of the reinforcement effect of carbon nanotubes in a typical matrix system. **2015**, 50, 461-478		12
396	Synthesis and properties of polyimide nanocomposites self-reinforced with electrospun poly(azo-naphthyl-imide)/carbon nanotube nanofibers. **2016**, 29, 312-326		8
395	Nanofibers as novel drug carrier--An overview. **2016**, 44, 135-43		50
394	A new perspective on hierarchical structure to analyse strength limiting factors of CNT yarns. **2016**, 2, 308		
393	Parametric Study of Strain Rate Effects on Nanoparticle-Reinforced Polymer Composites. **2016**, 2016, 1-9		8
392	Polyetheretherketone Hybrid Composites with Bioactive Nanohydroxyapatite and Multiwalled Carbon Nanotube Fillers. **2016**, 8,		26
391	Mechanical Strength Improvements of Carbon Nanotube Threads through Epoxy Cross-Linking. *Materials*, **2016**, 9,	3.5	20
390	Advanced Fabrication and Properties of Aligned Carbon Nanotube Composites: Experiments and Modeling. **2016**,		9
389	Probabilistic Strength Theory of Carbon Nanotubes and Fibers. **2016**, 123-146		
388	Micromechanical investigation of creep-recovery behavior of carbon nanotube-reinforced polymer nanocomposites. **2016**, 115-116, 45-55		62

387	Infrared laser ablation of polymeric nanocomposites: A study of surface structure and plume formation. **2016**, 120, 225103		2
386	Nanocomposite thin film coatings for brittle materials. **2016**, 2, 162-168		1
385	Highly reliable and efficient atomic force microscopy based bending test for assessing Young's modulus of one-dimensional nanomaterials. **2016**, 108, 123104		7
384	Boron-Filled Hybrid Carbon Nanotubes. **2016**, 6, 30495		8
383	Effect of carbon nanotube and silicon carbide on microstructure and dry sliding wear behavior of copper hybrid nanocomposites. **2016**, 26, 3170-3182		36
382	Experimental Study of the Mechanical Properties of a Novel Supramolecular Polymer Filament Using a Microtensile Tester Based on Electronic Balance. **2016**, 40, 737-742		1
381	Ultra-stiff large-area carpets of carbon nanotubes. **2016**, 8, 11993-2001		4
380	Vertically-Aligned Carbon Nanotubes for Electrochemical Energy Conversion and Storage. *Nanoscience and Technology*, **2016**, 253-270	0.6	4
379	Effects of synthesis catalyst and temperature on broadband dielectric properties of nitrogen-doped carbon nanotube/polyvinylidene fluoride nanocomposites. *Carbon*, **2016**, 106, 260-278	10.4	84
378	Rapid-Response, Widely Stretchable Sensor of Aligned MWCNT/Elastomer Composites for Human Motion Detection. **2016**, 1, 817-825		123
377	A novel methodology for self-healing at the nanoscale in CNT/epoxy composites. **2016**,		0
376	AFM-based mechanical characterization of single nanofibres. **2016**, 8, 8414-26		42
375	Fabrication of multi-walled carbon nanotube layers with selected properties via electrophoretic deposition: physicochemical and biological characterization. **2016**, 122, 1		18
374	Wet spinning of continuous polymer-free carbon-nanotube fibers with high electrical conductivity and strength. **2016**, 9, 055101		25
373	Thermal buckling of double-layered graphene sheets embedded in an elastic medium with various boundary conditions using a nonlocal new first-order shear deformation theory. *Composites Part B: Engineering*, **2016**, 97, 201-215	10	33
372	Deterioration of the Strong sp2 Carbon Network in Carbon Nanotubes during the Mechanical Dispersion Processing: A Review. **2016**, 41, 347-366		32
371	Nonlocal frequency analysis of nanosensors with different boundary conditions and attached distributed biomolecules: an approximate method. **2016**, 227, 2323-2342		7
370	Coaxial carbon@boron nitride nanotube arrays with enhanced thermal stability and compressive mechanical properties. **2016**, 8, 11114-22		25

369	Effects of Solvent on the Optical Nonlinearities of Multi-Walled Carbon Nanotubes under the Picosecond Laser Pulses. **2016**, 697, 695-700		
368	New processing method to fabricate high-performance carbon-nanotube/polyvinyl alcohol composite films. *Carbon*, **2016**, 110, 490-496	10.4	12
367	Reinforced and hardened three-phase-foams. **2016**, 73, 174-184		5
366	A simple chemical treatment for easy dispersion of carbon nanotubes in epoxy matrix for improving mechanical properties. **2016**, 51, 10775-10781		7
365	Current status and future directions for in situ transmission electron microscopy. **2016**, 170, 86-95		125
364	Multi-Functional Carbon Fibre Composites using Carbon Nanotubes as an Alternative to Polymer Sizing. **2016**, 6, 37334		53
363	Fast Monte Carlo Simulation-based Process Design and Planning for Carbon Nanotube Synthesis. **2016**, 5, 1357-1368		1
362	Interphase tuning for stronger and tougher composites. **2016**, 6, 26305		26
361	Mechanical test method and properties of a carbon nanomaterial with a high aspect ratio. **2016**, 3, 29		6
360	Nanostructured Silicon Anodes for High-Performance Lithium-Ion Batteries. **2016**, 26, 647-678		216
359	Fully integrated patterned carbon nanotube strain sensors on flexible sensing skin substrates for structural health monitoring. **2016**,		2
358	Microstructure and Mechanical Properties of CNT-Reinforced AZ91D Composites Fabricated by Ultrasonic Processing. **2016**, 29, 652-660		8
357	Effect of waviness and orientation of carbon nanotubes on random apparent material properties and RVE size of CNT reinforced composites. **2016**, 152, 870-882		39
356	A Many-Body Overview of Excitonic Effects in Armchair Graphene Nanoribbons. **2016**, 109-120		2
355	Functionally graded Timoshenko nanobeams: A novel nonlocal gradient formulation. *Composites Part B: Engineering*, **2016**, 100, 208-219	10	168
354	Towards nanoreliability of sensors incorporating interfaces between single-walled carbon nanotubes and metals: molecular dynamics simulations and in situ experiments using electron microscopy. **2016**, 40, 270-280		2
353	Processable conductive graphene/polyethylene nanocomposites: Effects of graphene dispersion and polyethylene blending with oxidized polyethylene on rheology and microstructure. *Polymer*, **2016**, 98, 143-155	3.9	57
352	Molecular dynamics simulation of defected carbon nanotubes. **2016**, 230, 654-662		4

351	Progression of alignment in stretched CNT sheets determined by wide angle X-ray scattering. *Carbon*, **2016**, 100, 309-317	10.4	9
350	Geometry and Self-stress of Single-Wall Carbon Nanotubes and Graphene via a Discrete Model Based on a 2nd-Generation REBO Potential. **2016**, 125, 1-37		21
349	Intrinsic strength and failure behaviors of ultra-small single-walled carbon nanotubes. **2016**, 114, 167-171		13
348	Electromechanical peridynamics modeling of piezoresistive response of carbon nanotube nanocomposites. **2016**, 113, 154-170		29
347	Toughness of carbon nanotubes conforms to classic fracture mechanics. **2016**, 2, e1500969		38
346	Cross-linking multiwall carbon nanotubes using PFPA to build robust, flexible and highly aligned large-scale sheets and yarns. *Nanotechnology*, **2016**, 27, 115701	3.4	8
345	Carbon nanotube dispersion in nematic liquid crystals: An overview. **2016**, 80, 38-76		115
344	Fabrication of individual carbon nanotubes and their arrays in a transmission electron microscope. *Carbon*, **2016**, 100, 435-440	10.4	6
343	Synthesis of carbon nanotubes by catalytic chemical vapour deposition: A review on carbon sources, catalysts and substrates. **2016**, 41, 67-82		292
342	Experimental and computational studies on the role of surface functional groups in the mechanical behavior of interfaces between single-walled carbon nanotubes and metals. **2016**, 51, 1217-1233		3
341	Real-time monitoring of carbon nanotube dispersion using dynamic light scattering and UV-vis spectroscopy. **2016**, 82, 361-367		11
340	Scaling up single-wall carbon nanotube laser annealing: effect on electrical resistance and hydrogen adsorption. *RSC Advances*, **2017**, 7, 5084-5092	3.7	6
339	Evaluation of the geopolymer/nanofiber interfacial bond strength and their effects on Mode-I fracture toughness of geopolymer matrix at high temperature. **2017**, 24, 817-831		15
338	Introduction. **2017**, 1-22		
337	Multi-walled carbon nanotubes grow under low pressure hydrogen, air, and argon ambient by arc discharge plasma. **2017**, 25, 269-272		10
336	An out-of-plane displacement measurement system based on hardware tracking. **2017**,		1
335	Micromechanics-based thermo-viscoelastic properties prediction of fiber reinforced polymers with graded interphases and slightly weakened interfaces. **2017**, 168, 440-455		29
334	Carbon-family materials for flame retardant polymeric materials. **2017**, 69, 22-46		275

333	Hierarchical Supramolecular Cross-Linking of Polymers for Biomimetic Fracture Energy Dissipating Sacrificial Bonds and Defect Tolerance under Mechanical Loading. **2017**, 6, 210-214		21
332	Carbon-based supercapacitors for efficient energy storage. **2017**, 4, 453-489		409
331	Crucial Role of Oxidation Debris of Carbon Nanotubes in Subsequent End-Use Applications of Carbon Nanotubes. **2017**, 9, 17552-17564		8
330	Hierarchical multiscale modeling of the effect of carbon nanotube damage on the elastic properties of polymer nanocomposites. **2017**, 12, 263-287		2
329	Rapid microwave irradiation synthesis of carbon nanotubes on graphite surface and its application on asphalt reinforcement. *Composites Part B: Engineering*, **2017**, 124, 134-143	10	21
328	Size effect on brittle and ductile fracture of two-dimensional interlinked carbon nanotube network. **2017**, 520, 82-88		4
327	Horizontally aligned carbon nanotube arrays: growth mechanism, controlled synthesis, characterization, properties and applications. **2017**, 46, 3661-3715		97
326	Carbon Nanotubes and Graphene for Microwave/RF Electronics Packaging. **2017**, 147-167		2
325	Tissue Repair. **2017**,		
324	New practical method of homogeneous dispersion of multi-walled carbon nanotubes (MWCNTs) into Mg matrix composites. **2017**, 182, 012028		2
323	A modified molecular-continuum model for estimating the strength and fracture toughness of graphene and carbon nanotube. **2017**, 176, 326-342		6
322	A representative and comprehensive review of the electrical and thermal properties of polymer composites with carbon nanotube and other nanoparticle fillers. **2017**, 66, 1237-1251		31
321	Flame-retardant carbon nanotube films. **2017**, 411, 177-181		15
320	Carbon Materials. **2017**, 429-462		1
319	The study of radiation effects in emerging micro and nano electro mechanical systems (M and NEMs). **2017**, 32, 013005		21
318	Effective elastic properties of two dimensional multiplanar hexagonal nanostructures. **2017**, 4, 025006		23
317	Multiscale modeling of carbon nanotube reinforced concrete. **2017**, 182, 251-260		20
316	On the formation of potential polymer-nanotube blends by liquid-solid phase separation. *Polymer*, **2017**, 131, 179-192	3.9	5

315	Adhesives with Nanoparticles. **2017**, 1-27		
314	Tensile properties of millimeter-long multi-walled carbon nanotubes. **2017**, 7, 9512		47
313	Moisture and temperature influence on mechanical behavior of PPS/buckypapers carbon fiber laminates. **2017**, 4, 075302		2
312	Modeling of tensile testing on perfect and defective graphenylene nanotubes using molecular dynamics simulations. **2017**, 4, 085012		2
311	Simulation for Carbon Nanotube Dispersion and Microstructure Formation in CNTs/AZ91D Composite Fabricated by Ultrasonic Processing. **2017**, 48, 2256-2266		3
310	Textile fibers coated with carbon nanotubes for smart clothing applications. **2017**,		1
309	Carbon Nanotubes. **2017**, 193-247		8
308	Electrical Conductance of a Zig Zag Carbon Nanotube in the Presence of a Few Vacancies Using Recursive Green's Function Method. **2017**, 6, M92-M96		
307	New Approach to Increase CNT Contents in Electrodeposited Ni-CNT Composite Thin Films by Modified Current Conditions. **2017**, 16, 931-938		
306	Mechanical properties and piezoresistive sensing capabilities of FRP composites incorporating CNT fibers. **2017**, 178, 1-8		23
305	Fluorination of Carbon Nanotubes A Review. **2017**, 200, 179-189		41
304	Application in powder metallurgy of CVD carbon nanofibres: microstructure and mechanical properties CNF reinforced Distaloy AQ. **2017**, 60, 345-352		1
303	Micromechanics modeling of the electrical conductivity of carbon nanotube cement-matrix composites. *Composites Part B: Engineering*, **2017**, 108, 451-469	10	84
302	Carbon nanotube electrodes for retinal implants: A study of structural and functional integration over time. **2017**, 112, 108-121		31
301	A comparison between the mechanical and thermal properties of single-walled carbon nanotubes and boron nitride nanotubes. **2017**, 85, 137-142		26
300	Dynamic stability analysis of multi-walled carbon nanotubes with arbitrary boundary conditions based on the nonlocal elasticity theory. *Mechanics of Advanced Materials and Structures*, **2017**, 24, 1180-1188	18	12
299	Surface amination of carbon nanoparticles for modification of epoxy resins: plasma-treatment vs. wet-chemistry approach. **2017**, 87, 422-448		39
298	Adsorption of anionic and cationic dyes from aqueous solution using gelatin-based magnetic nanocomposite beads comprising carboxylic acid functionalized carbon nanotube. **2017**, 308, 1133-1144		162

297	References. **2017**, 563-653		
296	Isomerization of sp2-hybridized carbon nanomaterials: structural transformation and topological defects of fullerene, carbon nanotube, and graphene. **2017**, 7, e1283		13
295	Mechanical analysis of double-layered circular graphene sheets as building material embedded in an elastic medium. **2017**, 24, 2717-2724		8
294	Fabrication of Copper/Single-Walled Carbon Nanotube Composites by Electrodeposition Using Free-Standing Nanotube Film. **2017**, 164, D922-D929		9
293	Nano- and microstructures in and for braids. **2017**, 409-418		
292	Aluminum and Nickel Matrix Composites Reinforced by CNTs: Dispersion/Mixture by Ultrasonication. **2017**, 7, 279		33
291	An Overview of Pesticide Monitoring at Environmental Samples Using Carbon Nanotubes-Based Electrochemical Sensors. **2017**, 3, 8		18
290	Nanocarbons in Electrospun Polymeric Nanomats for Tissue Engineering: A Review. **2017**, 9,		63
289	Production of TiO2 Coated Multiwall Carbon Nanotubes by the Sol-Gel Technique. **2017**, 20, 96-103		18
288	Interfacial Mechanical Behaviors in Carbon Nanotube Assemblies. **2017**,		2
287	Dry adhesives from carbon nanofibers grown in an open ethanol flame. **2017**, 8, 2719-2728		3
286	Mechanical properties of hollow and water-filled graphyne nanotube and carbon nanotube hybrid structure. *Nanotechnology*, **2018**, 29, 195702	3.4	5
285	Surface protection of austenitic steels by carbon nanotube coatings. **2018**, 6, 014005		5
284	Carbon nanomaterials for non-volatile memories. **2018**, 3,		64
283	Plasmon absorbance films of carboxylic functionalized CNTs coupled with renewable PGP platforms. **2018**, 29, 1861-1869		3
282	Characterization and Evaluation of Nanofiber Materials. **2018**, 1-32		1
281	Simulating the effects of carbon nanotube continuity and interfacial bonding on composite strength and stiffness. **2018**, 166, 10-19		18
280	Nano-architected metamaterials: Carbon nanotube-based nanotrusses. *Carbon*, **2018**, 131, 38-46	10.4	22

279	Effect of interfacial reaction on Young's modulus in CNT/Al nanocomposite: A quantitative analysis. **2018**, 137, 84-90		13
278	Structural transformations of carbon and boron nitride nanoscrolls at high impact collisions. **2018**, 20, 4911-4916		11
277	Atomistic analysis to characterize the impact of temperature and defects on the mechanical properties of germanene sheet. **2018**, 5, 015062		13
276	Enhanced interfacial bonding and mechanical properties in CNT/Al composites fabricated by flake powder metallurgy. *Carbon*, **2018**, 130, 333-339	10.4	81
275	Young□ Modulus Enhancement and Measurement in CNT/Al Nanocomposites. **2018**, 31, 1121-1129		6
274	Mechanical and electrical properties of carbon nanotube fibers from impregnation with poly(vinyl alcohol)/poly(acrylic acid) and subsequent thermal condensation. **2018**, 39, 971-977		4
273	Facile fabrication of PVA composite fibers with high fraction of multiwalled carbon nanotubes by gel spinning. **2018**, 58, 37-45		12
272	The role of thermal residual stress on the yielding behavior of carbon nanotube□luminum nanocomposites. **2018**, 14, 263-275		13
271	Carbon nanotubes: A potential material for energy conversion and storage. **2018**, 64, 219-253		129
270	Strong, ductile, and thermally conductive carbon nanotube-reinforced aluminum matrix composites fabricated by ball-milling and hot extrusion of powders encapsulated in aluminum containers. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2018**, 711, 460-469	5.3	21
269	Depth sensitivity of subsurface imaging using atomic force acoustic microscopy: FEA Study. **2018**, 2, 115021		1
268	Mechanical and Fracture Properties of Carbon Nanotubes. **2018**,		
267	. **2018**,		11
266	Processing and Properties of CNTs/ADC12 Nanocomposite. **2018**, 27, 6737-6747		2
265	Carbon Nanotubes. **2018**, 133-164		
264	A Convenient Electrochemical Method for Preparing Carbon Nanotubes Filled with Amorphous Boron. **2018**, 165, E879-E882		6
263	Carbon Nanotube-Graphene Composites Fibers. **2018**, 61-86		1
262	High Impact Polystyrene/CNT nanocomposites: Application of volume segregation strategy and behavior under extensional deformation. *Polymer*, **2018**, 157, 156-165	3.9	6

261	Isolation of Silk Mesostructures for Electronic and Environmental Applications. **2018**, 28, 1806380		44
260	In-situ characterization of bulk carbon nanotube behavior in a sheet under tensile load. **2018**, 17, 493-500		1
259	A Novel Strategy to Achieve Enhanced Reinforcement and Decreased Damping in CNT-Nanocomposites. **2018**, 2, 427		
258	Effects of Conformal Nanoscale Coatings on Thermal Performance of Vertically Aligned Carbon Nanotubes. **2018**, 14, e1800614		13
257	Investigation of affecting parameters on the effective modulus and natural frequency of wavy carbon nanotubes. **2018**, 121, 121-127		2
256	The toxicity and therapeutic effects of single-and multi-wall carbon nanotubes on mice breast cancer. **2018**, 8, 8375		55
255	Preparation of carbon nanofibers/tubes using waste tyres pyrolysis oil and coal fly ash derived catalyst. **2018**, 53, 1115-1122		10
254	Vibration Analysis of Bilayered Graphene Sheets for Building Materials in Thermal Environments Based on the Element-Free Method. **2018**, 2018, 1-14		1
253	Micromechanical analysis of carbon nanotube-coated fiber-reinforced hybrid composites. **2018**, 130, 215-229		49
252	19-Fold thermal conductivity increase of carbon nanotube bundles toward high-end thermal design applications. *Carbon*, **2018**, 139, 445-458	10.4	19
251	Preparation and application of hyperbranched polymer-modified polyethersulfone membrane containing NiPdSn-coated MWCNT for catalytic aryl halide coupling reactions. **2018**, 75, 5677-5694		2
250	Mechanical Properties of Isolated Carbon Nanotube. **2018**, 173-199		3
249	Solid state processed Al-1100 alloy/MWCNT surface nanocomposites. **2018**, 2, 196-207		15
248	Strengthening carbon nanotube fibers with semi-crystallized polyvinyl alcohol and hot-stretching. **2018**, 164, 290-295		20
247	Adhesives with Nanoparticles. **2018**, 1677-1702		1
246	Nanomechanics of graphene. **2019**, 6, 324-348		49
245	Free and forced vibration analysis of rectangular/circular/annular plates made of carbon fiber-carbon nanotube-polymer hybrid composites. **2019**, 26, 70-76		14
244	Enhanced arc erosion resistance of TiB2/Cu composites reinforced with the carbon nanotube network structure. **2019**, 183, 108136		22

243	The strength of mechanically-exfoliated monolayer graphene deformed on a rigid polymer substrate. **2019**, 11, 14339-14353		12
242	Enhancement in mechanical properties of multiwalled carbon nanotube-reinforced epoxy composites: Crosslinking of the reinforcement with the matrix via diamines. **2019**, 59, 1905-1910		3
241	Carbon nanotube-reinforced intermetallic matrix composites: processing challenges, consolidation, and mechanical properties. **2019**, 104, 3803-3820		2
240	Carbon Materials in Perovskite Solar Cells: Prospects and Future Challenges. **2019**, 2, 107-118		45
239	Evaluation of the sinterability, densification behaviour and microhardness of spark plasma sintered multiwall carbon nanotubes reinforced Ti6Al4V nanocomposites. *Ceramics International*, **2019**, 45, 19864-19878	5.1	13
238	Computing Buckling Characteristics of Double-Layered Graphene Film Embedded in an Elastic Foundation. **2019**, 19, 1950065		1
237	The rationale and emergence of electroconductive biomaterial scaffolds in cardiac tissue engineering. **2019**, 3, 041501		47
236	Micro-Crack Induced Buckypaper/PI Tape Hybrid Sensors with Enhanced and Tunable Piezo-Resistive Properties. **2019**, 9, 16920		7
235	The critical role of carbon in marrying silicon and graphite anodes for high-energy lithium-ion batteries. **2019**, 1, 57-76		154
234	Measurement of Friction Force Between Directly Integrated Carbon Nanotube Bundles in Tip-to-Tip Contact Using MEMS Tribometer Platform. **2019**,		
233	Survivability of carbon nanotubes in space. **2019**, 165, 129-138		4
232	Influence of tool rotation speeds on mechanical and morphological properties of friction stir processed nano hybrid composite of MWCNT-Graphene-AZ31 magnesium. **2019**, 7, 487-500		27
231	Carbon Nanotube Assembly and Integration for Applications. **2019**, 14, 220		118
230	Nickel coated carbon nanotubes in aluminum matrix composites: a multiscale simulation study. **2019**, 92, 1		9
229	An Overview of the Recent Developments in Metal Matrix Nanocomposites Reinforced by Graphene. *Materials*, **2019**, 12,	3.5	41
228	Understanding and control of interactions between carbon nanotubes and polymers for manufacturing of high-performance composite materials. **2019**, 183, 107795		27
227	Dispersion characteristics, interfacial bonding and nanostructural evolution of MWCNT in Ti6Al4V powders prepared by shift speed ball milling technique. **2019**, 785, 356-366		17
226	Optimization of Triton X-100 removal and ultrasound probe parameters in the preparation of multiwalled carbon nanotube buckypaper. **2019**, 166, 107612		30

225	Fabrication of aluminum-carbon nanotube nano-composite using aluminum-coated carbon nanotube precursor. **2019**, 53, 4055-4064		3
224	Property improvement of CNT spun yarns and their composites through pressing, stretching and tensioning. **2019**, 28, 507-524		6
223	n -l Interaction Promoted Charge Carrier Transfer between Helical SWNTs and a 4-(1-Pyrenyl)phenyl Group. **2019**, 123, 13976-13982		3
222	A new form of a Halpin sai micromechanical model for characterizing the mechanical properties of carbon nanotube-reinforced polymer nanocomposites. **2019**, 42, 1		12
221	Interface strengthening mechanisms of Ti/CFRP fiber metal laminate after adding MWCNTs to resin matrix. *Composites Part B: Engineering*, **2019**, 171, 254-263	10	15
220	Mechanical, tribological and electrical properties of Cu-CNT composites fabricated by flake powder metallurgy method. **2019**, 19, 694-706		31
219	Highly porous multiwalled carbon nanotube buckypaper using electrospun polyacrylonitrile nanofiber as a sacrificial material. **2019**, 5, e01386		9
218	Some basic aspects of polymer nanocomposites: A critical review. **2019**, 1, 2-30		278
217	Stretchable sensors for environmental monitoring. **2019**, 6, 011309		50
216	A Facile and Efficient Protocol for Preparing Residual-Free Single-Walled Carbon Nanotube Films for Stable Sensing Applications. *Nanomaterials*, **2019**, 9,	5.4	13
215	Characterization of Optimal Carbon Nanotubes Under Stretching and Validation of the CauchyBorn Rule. **2019**, 231, 465-517		2
214	Carbon Nanotubes and Graphene as Nanoreinforcements in Metallic Biomaterials: a Review. **2019**, 3, e1800212		38
213	Characterization, mechanical and in vitro biological behavior of hydroxyapatite-titanium-carbon nanotube composite coatings deposited on NiTi alloy by electrophoretic deposition. **2019**, 363, 179-190		33
212	How do the mechanical properties of carbon nanotubes increase? An experimental evaluation and modeling of the engineering tensile strength of individual carbon nanotubes. **2019**, 6, 055047		21
211	Flexible Carbon Nanotube Sensors with Screen Printed and Interdigitated Electrodes. **2019**,		1
210	A Modified Energy Method for Equilibrium Structure and Strain Energy of Armchair Single-Walled Carbon Nanotubes. **2019**, 298, 202-207		
209	Effect of microwave treatment exposure time on functionalization and purification of multi-walled carbon nanotubes (MWCNTs). **2019**, 125, 1		2
208	Influence of TiO2 and MWCNT nanoparticles dispersion on microstructure and mechanical properties of Al6061 matrix hybrid nanocomposites. **2019**, 6, 1265f3		5

207	In situ nanomechanical research on large-scale plastic deformation of individual ultrathin multi-walled carbon nanotube. **2019**, 32, 485-490		0
206	Thermal Conductivity and Tensile Properties of Carbon Nanofiber-Reinforced Aluminum-Matrix Composites Fabricated via Powder Metallurgy: Effects of Ball Milling and Extrusion Conditions on Microstructures and Resultant Composite Properties. **2019**, 32, 573-584		9
205	Synergistic effect of welding electrospun fibers and MWCNT reinforcement on strength enhancement of PAN/PVC non-woven mats for water filtration. **2019**, 193, 230-242		24
204	Tensile characteristics of single-walled carbon nanotubes endohedrally decorated with gold nanowires: A molecular dynamics study. **2019**, 92, 117-129		13
203	Cosmetic reconstruction in breast cancer patients: Opportunities for nanocomposite materials. **2019**, 86, 41-65		9
202	A Review of Spark Plasma Sintering of Carbon Nanotubes Reinforced Titanium-Based Nanocomposites: Fabrication, Densification, and Mechanical Properties. **2019**, 71, 567-584		14
201	Titanium dioxide protection against Al4C3 formation during fabrication of aluminum-TiO2 coated MWCNT composite. **2019**, 780, 772-782		9
200	Properties and behavior of carbon nanomaterials when interfacing neuronal cells: How far have we come?. *Carbon*, **2019**, 143, 430-446	10.4	80
199	Mechanical, thermal and electrical properties of nanostructured CNTs/SiC composites. *Ceramics International*, **2019**, 45, 2566-2575	5.1	19
198	Storage of Mechanical Energy Based on Carbon Nanotubes with High Energy Density and Power Density. **2019**, 31, e1800680		31
197	Analysis of Carbon Nanotube Arrays for Their Potential Use as Adhesives Under Harsh Conditions as in Space Technology. **2019**, 67, 1		6
196	Molecular-continuum model for the prediction of stiffness, strength and toughness of nanomaterials. **2019**, 230, 1451-1467		4
195	On the Free Vibrations of Piezoelectric Carbon Nanotube-Reinforced Microbeams: A Multiscale Finite Element Approach. **2019**, 43, 285-294		8
194	Low velocity impact analysis of beams made of short carbon fiber/carbon nanotube-polymer composite: A hierarchical finite element approach. *Mechanics of Advanced Materials and Structures*, **2019**, 26, 1104-1114	1.8	13
193	Preparation, properties and in vitro cellular response of multi-walled carbon nanotubes/bioactive glass/poly(etheretherketone) biocomposite for bone tissue engineering. **2019**, 68, 433-441		12
192	Elastoplastic behavior of the metal matrix nanocomposites containing carbon nanotubes: A micromechanics-based analysis. **2019**, 233, 676-686		4
191	Investigation of the effect of CNTs on the mechanical properties of LPET/glass fiber thermoplastic composites. **2020**, 33, 1652-1673		4
190	Mechanical properties of carbon-nanotube-reinforced cementitious materials: database and statistical analysis. **2020**, 72, 1047-1071		27

189	Aligned multi-walled carbon nanotubes with nanohydroxyapatite in a 3D printed polycaprolactone scaffold stimulates osteogenic differentiation. **2020**, 108, 110374		32
188	Mechanisms of mechanical reinforcement by graphene and carbon nanotubes in polymer nanocomposites. **2020**, 12, 2228-2267		121
187	Size-dependent dynamic characteristics of graphene based multi-layer nano hetero-structures. *Nanotechnology*, **2020**, 31, 145705	3.4	18
186	The critical role of the forest morphology for dry drawability of few-walled carbon nanotubes. *Carbon*, **2020**, 158, 662-671	10.4	6
185	When does nanotube grafting on fibers benefit the strength and toughness of composites?. **2020**, 188, 107989		10
184	Influence of hybrid graphene oxide/carbon nanotubes on the mechanical properties and microstructure of magnesium potassium phosphate cement paste. *Construction and Building Materials*, **2020**, 260, 120449	6.7	9
183	Enhancements of foamability, electromagnetic interference shielding and mechanical property of epoxy microcellular composite foam with well-dispersed f-MWCNTs. **2020**, 138, 106060		21
182	Carbon nanotubes and their polymeric composites: the applications in tissue engineering. **2020**, 5, 1		25
181	Fiber Composites Made of Low-Dimensional Carbon Materials. **2020**,		
180	Lattice and continuum based modeling of 2D materials. **2020**, 165-177		
179	Poly(ethylene Terephthalate) Carbon-Based Nanocomposites: A Crystallization and Molecular Orientation Study. **2020**, 12,		5
178	Exploring the effectiveness of incorporating carbon nanotubes into bioengineered scaffolds to improve cardiomyocyte function. **2020**, 13, 1347-1366		2
177	Quantum effects on the mechanical properties of fine-scale CNTs: an approach based on DFT and molecular mechanics model. **2020**, 135, 1		6
176	Thermal Investigations on Carbon Nanotubes by Spectroscopic Techniques. **2020**, 10, 8159		2
175	Polyetheretherketone and Its Composites for Bone Replacement and Regeneration. **2020**, 12,		18
174	Microbial fuel cells with yeast biofilms anode and buckypaper cathode. **2020**, 463, 012009		
173	Dry Drawability of Few-Walled Carbon Nanotubes Grown by Alcohol Chemical Vapor Deposition. **2020**, 124, 17331-17339		1
172	Probabilistic model for flexural strength of carbon nanotube reinforced cement-based materials. **2020**, 253, 112748		22

171	Optimized Separative Power of Hyperspeed Iguassu Gas Centrifuge: Dependence on the Rotor Diameter and Velocity. **2020**, 194, 1105-1115		7
170	Carbon Nanotubes. **2020**, 107-147		
169	. **2020**,		2
168	A Comprehensive Review on CNTs and CNT-Reinforced Composites: Syntheses, Characteristics and Applications. **2020**, 25, 101546		49
167	Super-durable ultralong carbon nanotubes. **2020**, 369, 1104-1106		42
166	On the elastic rod models for mechanical tests of one-dimensional nanostructures under transverse loads. **2020**, 128, 164303		2
165	Molecular Dynamics Simulation of Calcium-Silicate-Hydrate for Nano-Engineered Cement Composites-A Review. *Nanomaterials*, **2020**, 10,	5.4	13
164	Investigation of the relationship between adhesion force and mechanical behavior of vertically aligned carbon nanotube arrays. *Nanotechnology*, **2020**, 31, 295701	3.4	2
163	Microstructure and mechanical properties of zinc matrix composites reinforced with copper coated multiwall carbon nanotubes. **2020**, 7, 066516		3
162	Novel method for carbon nanotube growth using vapor-phase catalyst delivery. **2020**, 13, 2050026		
161	Carbon nanotube-incorporated cellulose nanocomposite sheet for flexible technology. **2020**, 43, 1		4
160	Synergistic strengthening effect of carbon nanotubes (CNTs) and titanium diboride (TiB2) microparticles on mechanical properties of copper matrix composites. **2020**, 9, 7989-8000		17
159	An iterative method for identification of temperature and amplitude dependent material parameters of fiber-reinforced polymer composites. **2020**, 184, 105818		13
158	Electrode materials for supercapacitors. **2020**, 35-204		3
157	On the Molecular to Continuum Modeling of Fiber-Reinforced Composites. **2020**, 3, 1900211		2
156	Materials, systems, and devices for wearable bioelectronics. **2020**, 1-48		
155	A critical role of interphase properties and features on mechanical properties of poly(vinyl alcohol) (PVA) bionanocomposites: nanoscaled characterisation and modelling. **2020**, 115-136		
154	Mathematical modeling and simulation. **2020**, 101-156		1

153	Influence of serrated edge and rectangular strips of MWCNT buckypaper on the electromagnetic properties of glass fiber/epoxy resin composites. *Carbon*, **2020**, 160, 317-327	10.4	17
152	Fabrication and Characterization of Solid Composite Yarns from Carbon Nanotubes and Poly(dicyclopentadiene). *Nanomaterials*, **2020**, 10,	5.4	4
151	Electrochemiluminescence revealing that HNO3-oxidized single-walled carbon nanotubes are essentially tubular graphene quantum dot-nanoassemblies. **2020**, 525, 146432		5
150	Preparation method and underlying mechanism of MWCNTs/Ti6Al4V nanocomposite powder for selective laser melting additive manufacturing. **2020**, 368, 59-69		11
149	The standard strength test of 3D printing materials and its application for UAV propellers. **2020**, 34, 2040017		2
148	A review on the mechanical properties of polymer composites reinforced by carbon nanotubes and graphene. *Carbon Letters*, **2021**, 31, 149-165	2.3	48
147	Recent research and progress of biodegradable zinc alloys and composites for biomedical applications: Biomechanical and biocorrosion perspectives. **2021**, 6, 836-879		61
146	Dispersion and fluorescence properties of multiwalled carbon nanotubes modified with hyperbranched poly(phenylalanine-lysine). **2021**, 608, 125557		5
145	Large variation in Young's modulus of carbon nanotube yarns with different diameters. **2021**, 21, 96-100		1
144	Boron nitride nanocomposites for microwave absorption: A review. **2021**, 13, 100108		15
143	Design and Crosstalk Analysis in Carbon Nanotube Interconnects. **2021**,		1
142	Microwave processing of polymer composites. **2021**, 351-380		1
141	Carbon nanotube-reduced graphene oxide fiber with high torsional strength from rheological hierarchy control. **2021**, 12, 396		10
140	Appendix: Carbon nanotubes. **2021**, 187-211		
139	Silicon Carbide Biotechnology: Carbon-Based Neural Interfaces. **2021**, 777-790		
138	Structural Analysis of Al-CNT Nanocomposite Using X-Ray Diffraction. 875, 138-145		
137	Smart nano-micro platforms for ophthalmological applications: The state-of-the-art and future perspectives. **2021**, 270, 120682		7
136	Controllable fabrication of lightweight carbon with hierarchically hollow structure for enhanced microwave absorption. **2021**, 113, 108285		1

135	A Wearable, Bending-Insensitive Respiration Sensor Using Highly Oriented Carbon Nanotube Film. **2021**, 21, 7308-7315		5
134	Investigation of shear forces in twisted carbon nanotube bundles using a structural mechanics approach. **2021**, 232, 2425-2441		0
133	Elastic modulus formulation of cementitious materials incorporating carbon nanotubes: Probabilistic approach. *Construction and Building Materials*, **2021**, 274, 122092	6.7	15
132	Analysis of quantum effects of fine scaling on the axial buckling of MWCNTs based on the density functional theory and molecular mechanics method. **2021**, 127, 1		3
131	Compound influence of topological defects and heteroatomic inclusions on the mechanical properties of SWCNTs. **2021**, 26, 102021		12
130	Optimizing Structural and Mechanical Properties of Coiled Carbon Nanotubes with NSGA-II and Reactive Molecular Dynamics Simulation. **2021**, 125, 6237-6248		2
129	Microfluidics for flexible electronics. **2021**, 44, 105-135		26
128	Synthesis of tunable high-thermal stability carbon dots via functionalization for applications in high-temperature environment. **2021**, 11, 1691-1706		2
127	Study on the mechanical and electrical properties of twisted CNT yarns fabricated from CNTs with various diameters. *Carbon*, **2021**, 176, 400-410	10.4	6
126	The Importance of Structural Factors for the Electrochemical Performance of Graphene/Carbon Nanotube/Melamine Powders towards the Catalytic Activity of Oxygen Reduction Reaction. *Materials*, **2021**, 14,	3.5	19
125	Continuous growth of carbon nanotube films: From controllable synthesis to real applications. **2021**, 144, 106359		3
124	A comprehensive assessment of empirical potentials for carbon materials. **2021**, 9, 061102		10
123	Tribological Behavior of Carbon-Based Nanomaterial-Reinforced Nickel Metal Matrix Composites. *Materials*, **2021**, 14,	3.5	4
122	Thermal and electrical properties enhancement of a nanocomposite of industrial silicone rubber filled with reduced graphene oxide. 1-11		0
121	Degradation of Carbon Nanotube Array Thermal Interface Materials through Thermal Aging: Effects of Bonding, Array Height, and Catalyst Oxidation. **2021**, 13, 30992-31000		4
120	Effect of CNT content on microstructure and hardness of AlSi/MWCNT nano composite. **2021**, 49, 1345-1345		1
119	Aluminum-Air Battery with Buckypaper Air Cathode. 891, 99-104		0
118	Fabrication and the mechanical and physical properties of nanocarbon-reinforced light metal matrix composites: A review and future directions. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2021**, 820, 141542	5.3	9

117	Mechanical Robustness of Metal Nanocomposites Rendered by Graphene Functionalization. **2021**, 21, 5706-5713	3
116	Semi-analytical atomic-level uncertainty quantification for the elastic properties of 2D materials. **2021**, 15, 100126	3
115	Characterizations of Polypropylene/Single-Walled Carbon Nanotube Nanocomposites Prepared by the Novel Melt Processing Technique with a Controlled Residence Time. **2021**, 9, 1395	1
114	Facile synthesis and applications of carbon nanotubes in heavy-metal remediation and biomedical fields: A comprehensive review. **2021**, 1238, 130462	26
113	Designing Materials and Processes for Strong Polyacrylonitrile Precursor Fibers. **2021**, 13,	0
112	Fluorescence and structural properties of polyvinyl alcohol fibers modified with multiwalled carbon nanotubes-hyperbranched poly (phenylalanine-lysine). 1	0
111	Multiscale modeling and numerical analyses of the electric conductivity of CNT/polymer nanocomposites taking into account the tunneling effect. e2955	0
110	Proposal of Analytical Model of Tensile Property of Untwisted Carbon Nanotube Yarn and Estimation of Tensile Property of Carbon Nanotube. **2021**, 62, 1291-1297	1
109	Epitaxial pyrolytic carbon coatings templated with defective carbon nanotube cores for structural annealing and tensile property improvement. 1	1
108	Functionalized Carbon Nano-Membranes Based Devices for Water Purification Technology. **2021**, 331-346	
107	Dependence of secondary operations in powder metallurgy and their impact on the electrical conductivity of MWCNTs/Cu nanocomposites. **2021**, 49, 2143-2143	
106	MXene/Carbon Nanotube Hybrids: Synthesis, Structures, Properties, and Applications. **2021**, 14, 5079-5111	1
105	Micro-cracking pattern recognition of hybrid CNTs/GNPs cement pastes under three-point bending loading using acoustic emission technique. **2021**, 42, 102816	5
104	Multiphase direct ink writing (MDIW) for multilayered polymer/nanoparticle composites. **2021**, 47, 102322	4
103	MRI magnetic compatible electrical neural interface: From materials to application. **2021**, 194, 113592	2
102	Mathematical Modeling of Elastic Plastic Transitional Stresses in CNT-GS based Hybrid Nanocomposite Thin Walled Spherical Pressure Vessels. 1033, 012058	
101	Electrospun nanofibres with antimicrobial activities. **2021**, 589-618	0
100	On the low reinforcing efficiency of carbon nanotubes in high-performance polymer fibres. **2021**, 7, 53-69	5

99	Preparation of high-performance carbon nanotube/polyamide composite materials by elastic high-shear kneading and improvement of properties by induction heating treatment. **2021**, 138, 50512		1
98	Extreme Energy Dissipation via Material Evolution in Carbon Nanotube Mats. **2021**, 8, 2003142		2
97	Fabrication and Fatigue of Fiber-Reinforced Polymer Nanocomposites A Tool for Quality Control. 335-368		1
96	Field Emission Microscopy of Multiwall CNTs. 95-107		3
95	Silicon-Based Anodes for Li-Ion Batteries. **2013**, 471-504		2
94	Characterization and Evaluation of Nanofiber Materials. **2019**, 491-522		6
93	CNT Applications in Displays and Transparent, Conductive Films/Substrates. **2018**, 73-75		1
92	Introduction to Carbon Nanotubes. **2007**, 43-112		22
91	Multi-Walled Carbon Nanotubes. **2013**, 147-188		22
90	Introduction. *Springer Theses*, **2012**, 1-78	0.1	4
89	Introduction to Carbon Nanotubes. **2004**, 39-98		1
88	Probabilistic Strength of Carbon Nanotube Yarns. *Solid Mechanics and Its Applications*, **2009**, 211-222	0.4	2
87	Absorption and Transportation of Carbon Nanotubes. *SpringerBriefs in Applied Sciences and Technology*, **2019**, 65-68	0.4	2
86	Bending moduli for forty-four select atomic monolayers from first principles. *Nanotechnology*, **2020**, 31, 43LT01	3.4	12
85	Al/MWCNT Composite Layer Deposition on Aluminum Alloy Substrate by Selective Laser Melting and Flame Spray. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2019**, 141,	3.3	2
84	Mechanical Characterization of Zinc Oxide Nanowires. **2006**,		1
83	Buckling characteristics of multiwalled carbon nanotubes under external pressure. *Interaction and Multiscale Mechanics*, **2009**, 2, 209-222		8
82	Mechanical behavior of individual WS2 nanotubes. **2004**, 19, 454		2

81	Nanomechanical studies of MEMS structures. *International Journal of Materials Research*, **2007**, 98, 384-388	0.9	7
80	Effect of Multi-Walled Carbon Nanotubes on Strength and Electrical Properties of Cement Mortar. *Materials*, **2020**, 14,	3.5	8
79	A New Route to Enhance the Packing Density of Buckypaper for Superior Piezoresistive Sensor Characteristics. *Sensors*, **2020**, 20,	3.8	1
78	Carbon Nanotube Synthesis and Growth Using Zeolite by Catalytic CVD and Applications. *Journal of the Korean Ceramic Society*, **2013**, 50, 1-17	2.2	5
77	Carbon nanotubes-properties and applications: a review. *Carbon Letters*, **2013**, 14, 131-144	2.3	236
76	Investigation of the Resistance Dependence on Temperature of Single Carbon Nanotube in Different Environments. *Japanese Journal of Applied Physics*, **2011**, 50, 125101	1.4	2
75	Removal of methylene blue from wastewater using hydrogel nanocomposites: A review. *Nanomaterials and Nanotechnology*, **2021**, 11, 184798042110394	2.9	5
74	Mechanical Behavior of Single and Bundled Defect-Free Carbon Nanotubes. *Accounts of Materials Research*,	7.5	5
73	Self-assembly behavior of ultra-high molecular weight in-situ anionically synthesized polymer matrix composite materials grafted from single- or multi-wall CNTs. *Polymer*, **2021**, 235, 124243	3.9	0
72	Nanomanipulator Measurements of the Mechanics of Nanostructures and Nanocomposites. *Nanoscience and Technology*, **2005**, 307-337	0.6	
71	Enhancement of the Mechanical Strength of Polymer-Based Composites Using Carbon Nanotubes. **2005**,		
70	Investigating Individual Carbon Nanotube/Polymer Interfaces with Scanning Probe Microscopy. *Nanoscience and Technology*, **2007**, 287-323	0.6	
69	Carbon Nanotube Polymer Composites. **2009**, 3-22		0
68	Encyclopedia of Sustainability Science and Technology. **2012**, 9293-9316		
67	Investigation of mechanical properties of multilayer carbon nanotubes. *Nauka I Obrazovanie*, **2013**, 13,		
66	Zastosowania nanorurek węglowych. **2014**,		
65	Charpy Impact Resistances of Carbon Nanotubes Reinforced High Density Polyethylene Nanocomposite Materials. *International Journal of Materials Mechanics and Manufacturing*, 247-250	0.3	
64	Sound field simulation of ultrasonic processing to fabricate carbon nanotubes reinforced AZ91D composites. *Wuli Xuebao/Acta Physica Sinica*, **2015**, 64, 144302	0.6	1

63	Carbon Nanotubes: Synthesis, Properties and Applications. 89-138		5
62	Thermal Properties of Inorganic Nanostructures. *Series in Materials Science and Engineering*, **2016**, 247-267		
61	Carbon nanotube electrodes for retinal implants: a study of structural and functional integration over time.		
60	Carbon Nanotube-/Graphene-Reinforced Ceramic Composites. **2017**, 599-625		0
59	Scaffolds Reinforced by Fibers or Tubes for Soft Tissue Repair. **2017**, 261-304		
58	Prediction of Carbon Nanotube Buckypaper Mechanical Properties with Integrated Physics-Based and Statistical Models. 307-333		
57	Deformed Carbon Nanotubes. *SpringerBriefs in Applied Sciences and Technology*, **2018**, 55-78	0.4	
56	Introduction. *SpringerBriefs in Applied Sciences and Technology*, **2018**, 1-15	0.4	
55	Experimental study on simultaneously measuring Young's modulus and internal fraction using self-mixing system. **2018**,		
54	PVA/BC Bionancomposite Films with Particle Size Effect. **2021**, 55-81		
53	Nanocellulose-Based Supercapacitor. **2020**,		
52	Significantly enhanced photoresponse of carbon nanotube films modified with cesium tungsten bronze nanoclusters in the visible to short-wave infrared range.. *RSC Advances*, **2021**, 11, 39646-39656	3.7	1
51	Origins of mechanical preconditioning in hierarchical nanofibrous materials. *Extreme Mechanics Letters*, **2022**, 50, 101576	3.9	0
50	Carbon Nanotubes: General Introduction. **2022**, 1-13		
49	Shape memory effect of Cu Al1-nitinol/MWCNT nanocomposites for actuators in MEMS. *Sensors and Actuators A: Physical*, **2022**, 334, 113327	3.9	1
48	High-strength and toughness carbon nanotube fiber/resin composites by controllable wet-stretching and stepped pressing. *Carbon*, **2022**, 189, 1-9	10.4	2
47	Axial Stiffness of Multiwalled Carbon Nanotubes as a Function of the Number of Walls. *Ukrainian Journal of Physics*, **2022**, 57, 933	0.4	
46	Effective electrical conductivity of CNT/polymer nanocomposites. **2020**,		

45	Carbon nanotube reinforced cementitious composites: A comprehensive review. *Construction and Building Materials*, **2022**, 315, 125100	6.7	8
44	Thermotropic liquid crystalline/multiwalled carbon nanotubes nanocomposites. **2022**, 91-116		
43	Effect of plasma-species to functionalize isocyanate-groups on multiwalled carbon nanotubes. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2022**, 40, 012804	1.3	0
42	Effect of carbon nanotube surface modification on tensile properties of carbon fiber epoxy impregnated bundle composites. *Polymers and Polymer Composites*, **2022**, 30, 096739112110676	0.8	
41	Effect of chiral angle and chiral index on the vibration of single-walled carbon nanotubes using nonlocal Euler-Bernoulli beam model. *Computational Condensed Matter*, **2022**, 30, e00655	1.7	0
40	Sequestration of Organic Dyes from Wastewater Using Hydrogel Nanocomposites. *Springer Series in Materials Science*, **2022**, 201-223	0.9	
39	Synthesis of Super-Long Carbon Nanotubes from Cellulosic Biomass under Microwave Radiation.. *Nanomaterials*, **2022**, 12,	5.4	2
38	Characterizing the Effect of Adding Boron Nitride Nanotubes on the Mechanical Properties of Electrospun Polymer Nanocomposite Microfibers Mesh.. *Materials*, **2022**, 15,	3.5	
37	Chemical Functionalization of Carbon Nanotubes and Applications to Sensors. **2022**, 261-286		1
36	Effective polymerization technique for plasma-treated multiwalled carbon nanotubes to maximize wear resistance of composite polyurethane. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2022**, 40, 022803	1.3	1
35	Mechano-tribological performance of Graphene/CNT reinforced alumina nanocomposites Review and quantitative insights. *Ceramics International*, **2022**, 48, 11879-11908	5.1	2
34	Micromechanics-based phase field fracture modelling of CNT composites. *Composites Part B: Engineering*, **2022**, 236, 109788	10	1
33	Insights into thermal characteristics of spiral carbon-based nanomaterials: From heat transport mechanisms to tunable thermal diode behavior. *International Journal of Heat and Mass Transfer*, **2022**, 189, 122719	4.9	
32	Extreme Dynamic Performance of Nanofiber Mats under Supersonic Impacts Mediated by Interfacial Hydrogen Bonds. *ACS Nano*, **2021**,	16.7	2
31	Bending characteristics of carbon nanotubes: Micropolar elasticity models and molecular dynamics simulations. *Mechanics of Advanced Materials and Structures*, 1-18	1.8	2
30	Numerical and experimental investigation of first ply failure response of multi-walled carbon nanotubes/epoxy/glass fiber hybrid laminated tapered curved composite panels. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 095440622210858	1.3	
29	Effect of dual-modified CNTs on strength and chloride resistance of cementitious systems. *Advances in Cement Research*, 1-44	1.8	
28	Experimental investigation of the friction modifying effects of different nanoforms of graphene additives in engine lubricating oil. *FME Transactions*, **2022**, 50, 248-259	1.6	

27	Tensile properties and fracture behavior of carbon nanotube-sheets/carbon fibers epoxy-impregnated bundle composites. *Polymers and Polymer Composites*, **2022**, 30, 096739112211094	0.8
26	The preparation of rigid hybrid silicone resins by combining carbon nanomaterial loading nanoparticles.	
25	Mechanical properties of nanotubes. **2022**, 445-480	0
24	Experimental investigation and finite element modelling of PMMA/carbon nanotube nanobiocomposites for bone cement applications. **2022**, 18, 6800-6811	0
23	Thermal properties of nanoparticle-based polymer composites. **2022**, 119-150	0
22	Characterization and in vivo toxicological evaluation of multi-walled carbon nanotubes: a low dose repeated intratracheal administrations study.	0
21	Evaluating the performance of ReaxFF potentials for sp2 carbon systems (graphene, carbon nanotubes, fullerenes) and a new ReaxFF potential. 10,	0
20	Low-loading oxidized multi-walled carbon nanotube grafted waterborne polyurethane composites with ultrahigh mechanical properties improvement. **2022**, 130, 109427	0
19	Controllable Preparation and Strengthening Strategies towards High-Strength Carbon Nanotube Fibers. **2022**, 12, 3478	0
18	Multi-level micromechanics-based homogenization for the prediction of damage behavior of multiscale fiber-reinforced composites. **2023**, 303, 116332	0
17	Covalent three-dimensional carbon nanotube and derived B-C-N polymorphs with superhardness and zero Poisson's ratio. **2022**, 105563	0
16	Carbon Nanotubes: General Introduction. **2022**, 1321-1333	0
15	Tannery wastes-derived gelatin and carbon nanotubes composite beads: adsorption and reuse studies using tartrazine yellow dye. **2022**, 27,	0
14	A Critical Review on Waste Plastic into Value-Added Hydrocarbons and Fuels. **2023**, 145-156	0
13	Emerging trends in flame retardancy of rigid polyurethane foam and its composites: A review. 0021955X2211445	45
12	Effect of Annealing and Diameter on Tensile Property of Spinnable Carbon Nanotube and Unidirectional Carbon Nanotube Reinforced Epoxy Composite. **2022**, 6, 389	0
11	Processing of Composite Electrodes of Carbon Nanotube Fabrics and Inorganic Matrices via Rapid Joule Heating.	1
10	Development of robust ultra-high-performance carbon nanofiber aggregates (UHPCNFAs) for structural health monitoring. **2023**, 279, 115559	0

9	Fabrication and Characterization of Carbon Nanotube/Bismaleimide Nanocomposite Laminates with Ultrahigh Nanofiber Volume Fraction. **2023**,	0
8	Fabrication and Characterization of Carbon Nanotube/Silicon Carbide Nanocomposite Laminates. **2023**,	0
7	Prospects and future perspectives of electronic materials for solar energy applications. **2023**, 281-296	0
6	Durability and Fractal Analysis of Pore Structure of Crumb Rubber Concrete Modified with Carbon Nanotubes.	0
5	Experimental investigation on thermal properties of carbon nanotubes/zinc silicate composites prepared by powder processing. **2023**, 134, 109772	0
4	Raman spectroscopy used for estimating the effective elastic modulus of carbon nanotubes in aligned multi-walled carbon nanotubes/ epoxy composites under tensile loading. **2023**, 167, 107448	0
3	Enhanced reliability with bimodal microstructure and transformation-induced toughening in Al2O3-YSZ based thermal barrier coatings. **2023**, 462, 129488	0
2	Functionalized Carbon Nanotubes. **2023**, 281-317	0
1	Geometrically nonlinear post-buckling of advanced porous nanocomposite lying on elastic foundation in hygrothermal environment.	0