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2021

Highly stretchable and sensitive self-powered sensors based on the N-Type thermoelectric effect of polyurethane/Nax(Ni-ett)n/graphene oxide composites.

Wan K, Liu Z, Schroeder BC, Chen G, Santagiuliana G, Papageorgiou DG, Zhang H and Bilotti E. *Composites Communications* vol. 28,.

Multifunctional epoxy nanocomposites reinforced by two-dimensional materials: A review.

Dong M, Zhang H, Tzounis L, Santagiuliana G, Bilotti E and Papageorgiou DG. *Carbon* vol. 185, 57-81.

Best of Both Worlds: Synergistically Derived Material Properties via Additive Manufacturing of Nanocomposites (Adv. Funct. Mater. 46/2021).

Carrola M, Asadi A, Zhang H, Papageorgiou DG, Bilotti E and Koerner H. *Advanced Functional Materials* vol. 31, (46).

Best of Both Worlds: Synergistically Derived Material Properties via Additive Manufacturing of Nanocomposites.

Carrola M, Asadi A, Zhang H, Papageorgiou DG, Bilotti E and Koerner H. *Advanced Functional Materials* vol. 31, (46).

Micro-end-milling of carbon nanotube reinforced epoxy nanocomposites manufactured using three roll mill technique.

Le B, Kernin A, Khaliq J, Fu G, Huo D, Bilotti E, Zhang H and Shyha I. *Journal of Manufacturing Processes* vol. 70, 307-320.

Microcellular epoxy/graphene nanocomposites with outstanding electromagnetic interference shielding and mechanical performance by overcoming nanofiller loading/dispersion dichotomy.

Fan X, Gao Q, Gao Y, Zhang G, Huang F, Xiao R, Liu W, Wang F, Qin J, Bilotti E, Zhang H, Shi X and Zhang G. *Composites Science and Technology* 109000-109000.

Thermoelectric Materials: Current Status and Future Challenges.

Finn PA, Asker C, Wan K, Bilotti E, Fenwick O and Nielsen CB. *Frontiers in Electronic Materials* vol. 1, 677845-677845.

Self-powered ultrasensitive and highly stretchable temperature-strain sensing composite yarns.

Wan K, Liu Y, Santagiuliana G, Barandun G, Taroni Junior P, Güder F, Bastiaansen CWM, Baxendale M, Fenwick O, Papageorgiou DG, Krause S, Zhang H and Bilotti E. *Materials Horizons*.

Polymer Nanocomposites for Temperature Sensing and Self-regulating Heating Devices.

Liu Y, Zhang H and Bilotti E. *Polymer Nanocomposite Materials*.

Photo-Actuation Stress of Ultra-Drawn Chain-Extended Polyethylene.

Bhatti MRA, Bilotti E, Peijs T and Bastiaansen CWM. *Acs Applied Polymer Materials*. American Chemical Society.

Static and Dynamic Postannealing Strategies for Roll-to-Roll Fabrication of DC Magnetron Sputtered Bismuth Telluride Thin Films onto Polymer Webs.

Tao X, Stuart BW, Wan K, Murray JW, Bilotti E and Assender HE. *Acs Applied Materials and Interfaces* vol. 13, (8) 10149-10160.

Tailoring nanofibrillated cellulose through sonication and its potential use in molded pulp packaging.

Klayya S, Tawichai N, Intatha U, Zhang H, Bilotti E and Soykeabkaew N. *Nanocomposites vol. 7, (1) 109-122.*

Low-cost Free-standing ferroelectric polymer films with high polarization produced via pressing-and-folding.

Meng N, Ren X, Wu J, Bilotti E, Reece MJ and Yan H. *Journal of Materiomics.*

2020

Nano- And Microfiber PVB Patches as Natural Oil Carriers for Atopic Skin Treatment.

Krysiak ZJ, Kaniuk Å, Metwally S, Szewczyk PK, Sroczyk EA, Peer P, Lisiecka-Graca P, Bailey RJ, Bilotti E and Stachewicz U. *Acs Applied Bio Materials vol. 3, (11) 7666-7676.*

BixTey thermoelectric thin films sputtered at room temperature onto moving polymer web: Effect of gas pressure on materials properties.

Tao X, Wan K, Stuart BW, Bilotti E and Assender HE. *Thin Solid Films vol. 712,.*

Multiscale understanding of electric polarization in poly(vinylidene fluoride)-based ferroelectric polymers.

Meng N, Ren X, Zhu X, Wu J, Yang B, Gao F, Zhang H, Liao Y, Bilotti E, Reece MJ and Yan H. *Journal of Materials Chemistry C.Royal Society of Chemistry.*

Vapor grown carbon nanofiber based cotton fabrics with negative thermoelectric power.

Paleo AJ, Vieira EMF, Wan K, Bondarchuk O, Cerqueira MF, Bilotti E, Melle-Franco M and Rocha AM. *Cellulose vol. 27, (15) 9091-9104.*

The effect of conductive network on positive temperature coefficient behaviour in conductive polymer composites.

Liu Y, Asare E, Porwal H, Barbieri E, Goutianos S, Evans J, Newton M, Busfield JJC, Peijs T, Zhang H and Bilotti E. *Composites Part a: Applied Science and Manufacturing vol. 139,Elsevier.*

Improving water harvesting efficiency of fog collectors with electrospun random and aligned Polyvinylidene fluoride (PVDF) fibers.

Knapczyk-Korczak J, Szewczyk PK, Ura DP, Bailey RJ, Bilotti E and Stachewicz U. *Sustainable Materials and Technologies vol. 25,.*

Transparent semi-crystalline polymeric materials and their nanocomposites: A review.

Lin Y, Bilotti E, Bastiaansen CWM and Peijs T. *Polymer Engineering & Science.*

Photo-thermal actuation of ultra-drawn high-density polyethylene.

Bhatti MRA, Bilotti E, Zhang H, Bastiaansen CWM and Peijs T. *Polymer vol. 207,Elsevier.*

Substitutional doping of hybrid organic-inorganic perovskite crystals for thermoelectrics.

TANG W, Zhang J, RATNASINGHAM SR, Liscio F, CHEN K, Liu T, Wan K, Suena Galindez E, Bilotti E, Reece M, Baxendale M, Milita S, McLachlan M, Su L and Fenwick O. *Journal of Materials Chemistry A.Royal Society of Chemistry (Rsc).*

Ultra-High Actuation Stress Polymer Actuators as Light-Driven Artificial Muscles.

Bhatti MRA, Bilotti E, Zhang H, Varghese S, Verpaalen RCP, Schenning APHJ, Bastiaansen CWM and Peijs T. *Acs Applied Materials & Interfaces vol. 12, (29) 33210-33218.*

A Review on Functionally Graded Materials and Structures via Additive Manufacturing: From Multi-Scale Design to Versatile Functional Properties.

Li Y, Feng Z, Hao L, Huang L, Xin C, Wang Y, Bilotti E, Essa K, Zhang H, Li Z, Yan F and Peijs T. *Advanced Materials Technologies vol. 5, (6).*

High-Performance Transparent Laminates Based on Highly Oriented Polyethylene Films.

Lin Y, Cao J, Zhu M, Bilotti E, Zhang H, Bastiaansen CWM and Peijs T. *Acs Applied Polymer Materials vol. 2, (6) 2458-2468.American Chemical Society.*

Thermoelectric behaviour of Bi-Te films on polymer substrates DC-sputtered at room-temperature in moving web deposition.

Tao X, Wan K, Deru J, Bilotti E and Assender HE. *Surface and Coatings Technology vol. 385,.*

Giant energy storage density in PVDF with internal stress engineered polar nanostructures.

Ren X, Meng N, Zhang H, Wu J, Abrahams I, Yan H, Bilotti E and Reece MJ. *Nano Energy* vol. 72,.Elsevier.

Fatigue of carbon cord-rubber composites: Effect of frequency, R ratio and lifetime prediction using constant life models.

Busfield J, Bilotti E, Peijs T, Tao Y and Stevens C. *International Journal of Fatigue*.Elsevier.

Sustainable and self-regulating out-of-oven manufacturing of FRPs with integrated multifunctional capabilities.

Liu Y, van Vliet T, Tao Y, Busfield JJC, Peijs T, Bilotti E and Zhang H. *Composites Science and Technology* vol. 190,. Elsevier.

Dual in-situ water diffusion monitoring of gfrps based on optical fibres and cnts.

Bellot CM, de Leo G, Zhang H, Kernin A, Scarponi C, Sangermano M, Olivero M, Bilotti E and Salvo M. *Journal of Composites Science* vol. 4, (3).

2019

Ultrahigh β -phase content poly(vinylidene fluoride) with relaxor-like ferroelectricity for high energy density capacitors.

Meng N, Ren X, Santagiuliana G, Ventura L, Zhang H, Wu J, Yan H, Reece MJ and Bilotti E. *Nature Communications* vol. 10, (1).

Nanoclay assisted ultra-drawing of polypropylene tapes.

van Erp TB, Reynolds CT, Bilotti E and Peijs T. *Nanocomposites* vol. 5, (4) 114-123.

A meshless method for the nonlinear von Kármán plate with multiple folds of complex shape: A bridge between cracks and folds.

Barbieri E, Ventura L, Grignoli D and Bilotti E. *Computational Mechanics* vol. 64, (3) 769-787.

Flexible and Stretchable Self-Powered Multi-Sensors Based on the N-Type Thermoelectric Response of Polyurethane/Na_x(Ni-ett)_n Composites.

Wan K, Taroni PJ, Liu Z, Liu Y, Tu Y, Santagiuliana G, Hsia I, Zhang H, Fenwick O, Krause S, Baxendale M, Schroeder BC and Bilotti E. *Advanced Electronic Materials* 1900582-1900582. Wiley.

Negative thermoelectric power of melt mixed vapor grown carbon nanofiber polypropylene composites.

Paleo AJ, Vieira EMF, Wan K, Bondarchuk O, Cerqueira MF, Goncalves LM, Bilotti E, Alpuim P and Rocha AM. *Carbon* vol. 150, 408-416.

Additive manufacturing high performance graphene-based composites: A review.

Li Y, Feng Z, Huang L, Essa K, Bilotti E, Zhang H, Peijs T and Hao L. *Composites Part a: Applied Science and Manufacturing* vol. 124,.

A Photoaddressable Liquid Crystalline Phase Transition in Graphene Oxide Nanocomposites.

Crespo M, Santagiuliana G, Picot O, Portale G, Bilotti E and Gautrot JE. *Advanced Functional Materials* vol. 29, (24).

Photo-Responsive Graphene: A Photoaddressable Liquid Crystalline Phase Transition in Graphene Oxide Nanocomposites (Adv. Funct. Mater. 24/2019).

Crespo M, Santagiuliana G, Picot O, Portale G, Bilotti E and Gautrot JE. *Advanced Functional Materials* vol. 29, (24).

Glass-like transparent high strength polyethylene films by tuning drawing temperature.

LIN Y, Patel R, CAO J, TU W, ZHANG H, BILOTTI E, BASTIAANSEN C and PEIJS AA. *Polymer* vol. 171, 180-191.Elsevier.

Remarkably enhanced polarisability and breakdown strength in PVDF-based interactive polymer blends for advanced energy storage applications.

Ren X, Meng N, Yan H, Bilotti E and Reece MJ. *Polymer* vol. 168, 246-254.

2018

The effect of graphene network formation on the electrical, mechanical, and multifunctional properties of graphene/epoxy nanocomposites.

KERNIN A, WAN K, LIU Y, kong J, shi X, BILOTTI E, Peijs T and ZHANG H. *Composites Science and Technology* vol. 169, 224-231.Elsevier.

Pyroresistivity in Conductive Polymer Composites: A Perspective on Recent Advances and New Applications.
BILOTTI E, LIU Y, ZHANG H, PORWAL H, BUSFIELD J and PEIJS AA. *Polymer International*. Wiley.

Development of a novel fatigue test method for cord-rubber composites.

Tao Y, Windslow R, Stevens CA, Bilotti E, Peijs T and Busfield JJC. *Polymer Testing* vol. 71, 238-247.

Breaking the Nanoparticle Loading-Dispersion Dichotomy in Polymer Nanocomposites with the Art of Croissant-Making.

Santagiuliana G, Picot OT, Crespo M, Porwal H, Zhang H, Li Y, Rubini L, Colonna S, Fina A, Barbieri E, Spoelstra AB, Mirabello G, Patterson JP, Botto L, Pugno NM, Peijs T and Bilotti E. *Acs Nano*.

Smart cord-rubber composites with integrated sensing capabilities by localised carbon nanotubes using a simple swelling and infusion method.

Tao Y, Liu Y, Zhang H, Stevens CA, Bilotti E, Peijs T and Busfield JJC. *Composites Science and Technology* vol. 167, 24-31.

Multilayer coextrusion of graphene polymer nanocomposites with enhanced structural organization and properties.

Gao Y, Picot OT, Tu W, Bilotti E and Peijs T. *Journal of Applied Polymer Science* vol. 135, (13).

Tailored pyroresistive performance and flexibility by introducing a secondary thermoplastic elastomeric phase into graphene nanoplatelet (GNP) filled polymer composites for self-regulating heating devices.

Liu Y, Zhang H, Porwal H, Tu W, Wan K, Evans J, Newton M, Busfield JJC, Peijs T and Bilotti E. *Journal of Materials Chemistry C* vol. 6, (11) 2760-2768.

Synergistic Effects of Spray-Coated Hybrid Carbon Nanoparticles for Enhanced Electrical and Thermal Surface Conductivity of CFRP Laminates.

Li Y, Zhang H, Liu Y, WANG HS, Huang Z, Peijs T and Bilotti E. *Composites Part a: Applied Science and Manufacturing*.

Organic thermoelectric composites materials.

Bilotti E, Fenwick O, Schroeder BC, Baxendale M, Taroni-Junior P, Degousé T and Liu Z. *Comprehensive Composite Materials II*.

2017

Toward Stretchable Self-Powered Sensors Based on the Thermoelectric Response of PEDOT:PSS/Polyurethane Blends.

Taroni PJ, SANTAGIULIANA G, WAN K, Calado P, QIU M, ZHANG H, PUGNO N, PALMA M, Stingelin-Stutzmann N, Heeney M, FENWICK O, BAXENDALE M and BILOTTI E. *Advanced Functional Materials*. Wiley.

Universal Control on Pyro-resistive Behaviour of Flexible Self-regulating Heating Devices.

LIU Y, ZHANG H, PORWAL H, TU W, Evans J, NEWTON M, BUSFIELD JJC, Peijs and Bilotti E. *Advanced Functional Materials*. Wiley.

Organic Thermoelectric Composites Materials.

Bilotti E, FENWICK OJ, Schroeder BC, Baxendale M, Taroni Junior P, Degousee T and Liu Z. *Comprehensive Composite Materials II*. Editors: Zweben CH and Beaumont PWR.

Fatigue behaviour of unidirectional carbon-cord reinforced composites and parametric models for life prediction.

Tao Y, Bilotti E, Busfield JJC and Stevens CA. *Constitutive Models For Rubber X*.

Crystallization kinetics and enhanced dielectric properties of free standing lead-free PVDF based composite films.

Meng N, Mao R, Tu W, Odolczyk K, Zhang Q, Bilotti E and Reece MJ. *Polymer* vol. 121, 88-96.

Interlaminar toughening of woven fabric carbon/epoxy composite laminates using hybrid aramid/phenoxy interleaves.

Wong D, ZHANG H, BILOTTI E and PEIJS T. *Composites Part a: Applied Science and Manufacturing* vol. 101, 151-159. Elsevier.

Synergistic effects of filler size on thermal annealing-induced percolation in polylactic acid (PLA)/graphite nanoplatelet (GNP) nanocomposites.

Gao Y, Picot OT, Zhang H, Bilotti E and Peijs T. *Nanocomposites vol. 3, (2) 67-75.*

Graphite Nanoplatelet Modified Epoxy Resin for Carbon Fibre Reinforced Plastics with Enhanced Properties.

Li Y, Zhang H, Huang Z, Bilotti E and Peijs T. *Journal of Nanomaterials vol. 2017.*

Nanoscale Interfacial Electroactivity in PVDF/PVDF-TrFE Blended Films with Enhanced Dielectric and Ferroelectric Properties.

MENG N, Zhu X, Mao R, Reece M and Bilotti E. *Journal of Materials Chemistry C vol. 5, 3296-3305. Royal Society of Chemistry.*

Filtration effects of graphene nanoplatelets in resin infusion processes: Problems and possible solutions.

Zhang H, Liu Y, Huo S, Briscoe J, Tu W, Picot OT, Rezai A, Bilotti E and Peijs T. *Composites Science and Technology vol. 139, 138-145.*

Preparation of High Modulus Poly(Ethylene Terephthalate): Influence of Molecular Weight, Extrusion, and Drawing Parameters.

Zhang JM, Hua Q, Reynolds CT, Zhao Y, Dai Z, Bilotti E, Tang J and Peijs T. *International Journal of Polymer Science vol. 2017.*

Mechanical, Electrical and Thermal Properties of In-situ Exfoliated Graphene/Epoxy Nanocomposites.

ZHANG H, Li Y, porwal H, Huang Z, Bilotti E and Peijs T. *Composites Part a: Applied Science and Manufacturing. Elsevier.*

Influence of filler size on the properties of poly(lactic acid) (PLA)/graphene nanoplatelet (GNP) nanocomposites.

Gao Y, Picot OT, Bilotti E and Peijs T. *European Polymer Journal vol. 86, 117-131.*

2016

Dissolvable thermoplastic interleaves for carbon nanotube localization in carbon/epoxy laminates with integrated damage sensing capabilities.

Zhang H, Liu Y, Huang M, Bilotti E and Peijs T. *Structural Health Monitoring vol. 17, (1) 59-66. Sage Publications.*

In Situ Exfoliation of Graphene in Epoxy Resins: A Facile Strategy to Efficient and Large Scale Graphene Nanocomposites.

Li Y, Zhang H, Crespo M, Porwal H, Picot O, Santagiuliana G, Huang Z, Barbieri E, Pugno NM, Peijs T and Bilotti E. *Acs Appl Mater Interfaces vol. 8, (36) 24112-24122.*

Processing and Characterization of Free Standing Highly Oriented Ferroelectric Polymer Films with Remarkably Low Coercive Field and High Remnant Polarization.

MENG N, Mao R, Tu W, Zhu X, Wilson R, Bilotti E and Reece M. *Polymer vol. 100, 69-76.*

Cylindrical array luminescent solar concentrators: performance boosts by geometric effects.

Videira JJH, Bilotti E and Chatten AJ. *Optics Express vol. 24, (14) A1188-A1188. Optical Society of America: Open Access Journals.*

Effect of particle size and shape on positive temperature coefficient (PTC) of conductive polymer composites (CPC) -- a model study.

Asare E, Evans J, Newton M, Peijs T and Bilotti E. *Materials and Design vol. 97, 459-463.*

Effect of mixed fillers on positive temperature coefficient of conductive polymer composites.

Asare E, Basir A, Tu W, Porwal H, Zhang H, Liu Y, Evans J, Newton M, Peijs T and Bilotti E. *Nanocomposites vol. 2, (2) 58-64.*

Enhanced Thermal and Electrical Properties of Polystyrene-Graphene Nanofibers via Electrospinning.

Li Y, Porwal H, Huang Z, Zhang H, Bilotti E and Peijs T. *Journal of Nanomaterials vol. 2016.*

Optimization of Three-Roll Mill Parameters for In-Situ Exfoliation of Graphene.

Li Y, Zhang H, Bilotti E and Peijs T. *Mrs Advances vol. 1, (19) 1389-1394.*

Graphene Delivery Systems for Hierarchical Fiber Reinforced Composites.

Li Y, Zhang H, Peijs T and Bilotti E. *Mrs Advances* vol. 1, (19) 1339-1344.

Nano-engineered hierarchical carbon fibres and their composites: Preparation, properties and multifunctionalities.

Zhang H, Bilotti E and Peijs T. *The Structural Integrity of Carbon Fiber Composites: Fifty Years of Progress and Achievement of The Science, Development, and Ap.*

2015

Oriented Poly(lactic acid)/Carbon Nanotube Composite Tapes with High Electrical Conductivity and Mechanical Properties.

Mai F, Deng H, Tu W, Chankajorn S, Fu Q, Bilotti E and Peijs T. *Macromolecular Materials and Engineering* vol. 300, (12) 1257-1267.

Localized toughening of carbon/epoxy laminates using dissolvable thermoplastic interleaves and electrospun fibres.

Zhang H, Bharti A, Li Z, Du S, Bilotti E and Peijs T. *Composites Part a: Applied Science and Manufacturing* vol. 79, 116-126.

The influence of solid-state drawing on mechanical properties and hydrolytic degradation of melt-spun poly(lactic acid) (PLA) tapes.

Mai F, Tu W, Bilotti E and Peijs T. *Fibers* vol. 3, (4) 523-538.

Factors affecting fatigue life of cord reinforced rubber and the stress distribution modelling under static and dynamic conditions.

Tao Y, Bilotti E, Thomas A, Busfield J, Hayes C and Stevens C. *Constitutive Models For Rubber Ix.*

The use of carbon nanotubes for damage sensing and structural health monitoring in laminated composites: a review.

Zhang H, Bilotti E and Peijs T. *Nanocomposites* vol. 1, (4) 167-184.

Static and dynamic percolation of phenoxy/carbon nanotube nanocomposites.

Zhang H, Bilotti E, Tu W, Lew CY and Peijs T. *European Polymer Journal* vol. 68, 128-138.

In-situ monitoring of interlaminar shear damage in carbon fibre composites.

Zhang H, Liu Y, Bilotti E and Peijs T. *Advanced Composites Letters* vol. 24, (4) 92-97.

In-Situ Monitoring of Interlaminar Shear Damage in Carbon Fibre Composites.

Zhang H, Liu Y, Bilotti E and Peijs T. *Advanced Composites Letters* vol. 24, (4).

Preparation and properties of self-reinforced poly(lactic acid) composites based on oriented tapes.

Mai F, Tu W, Bilotti E and Peijs T. *Composites Part a: Applied Science and Manufacturing* vol. 76, 145-153.

High mechanical reinforcing efficiency of layered poly(vinyl alcohol)-graphene oxide nanocomposites.

Sellam C, Zhai Z, Zahabi H, Picot OT, Deng H, Fu Q, Bilotti E and Peijs T. *Nanocomposites* vol. 1, (2) 89-95.

Improved fracture toughness and integrated damage sensing capability by spray coated CNTs on carbon fibre prepreg.

Zhang H, Liu Y, Kuwata M, Bilotti E and Peijs T. *Composites Part a: Applied Science and Manufacturing* vol. 70, 102-110.

Integrated damage sensing in fibre-reinforced composites with extremely low carbon nanotube loadings.

Zhang H, Kuwata M, Bilotti E and Peijs T. *Journal of Nanomaterials* vol. 2015,.

2014

Physical properties of poly lactic acid/clay nanocomposite films: Effect of filler content and annealing treatment.

Russo P, Cammarano S, Bilotti E, Peijs T, Cerruti P and Acierno D. *Journal of Applied Polymer Science* vol. 131, (2).

Thermoelectric materials: A brief historical survey from metal junctions and inorganic semiconductors to organic polymers.

Taroni PJ, Hoces I, Stingelin N, Heeney M and Bilotti E. *Israel Journal of Chemistry*.

In situ polymerised polyamide 6/sepiolite nanocomposites: Effect of different interphases.

Bilotti E, Duquesne E, Deng H, Zhang R, Quero F, Georgiades SN, Fischer HR, Dubois P and Peijs T. *European Polymer Journal* vol. 56, (1) 131-139.

Nanoparticle-induced co-continuity in immiscible polymer blends - A comparative study on bio-based PLA-PA11 blends filled with organoclay, sepiolite, and carbon nanotubes.

Nuzzo A, Bilotti E, Peijs T, Acierno D and Filippone G. *Polymer (United Kingdom)*.

2013

Poly(lactic acid)/carbon nanotube nanocomposites with integrated degradation sensing.

Mai F, Habibi Y, Raquez JM, Dubois P, Feller JF, Peijs T and Bilotti E. *Polymer* vol. 54, (25) 6818-6823.

Thermal degradation and flammability behavior of polypropylene/clay/carbon nanotube composite systems.

Hapuarachchi TD, Peijs T and Bilotti E. *Polymers For Advanced Technologies* vol. 24, (3) 331-338.

Strain sensing behaviour of elastomeric composite films containing carbon nanotubes under cyclic loading.

Zhang R, Deng H, Valenca R, Jin J, Fu Q, Bilotti E and Peijs T. *Composites Science and Technology* vol. 74, 1-5.

Controlling the dynamic percolation of carbon nanotube based conductive polymer composites by addition of secondary nanofillers: The effect on electrical conductivity and tuneable sensing behaviour.

Bilotti E, Zhang H, Deng H, Zhang R, Fu Q and Peijs T. *Composites Science and Technology* vol. 74, 85-90.

Modified resistivity-strain behavior through the incorporation of metallic particles in conductive polymer composite fibers containing carbon nanotubes.

Lin L, Deng H, Gao X, Zhang S, Bilotti E, Peijs T and Fu Q. *Polymer International* vol. 62, (1) 134-140.

Nainggolan H, Gea S, Bilotti E, Peijs T and Hutagalung SD. *Beilstein J Nanotechnol* vol. 4, 325-329.

Physical properties of poly lactic acid/clay nanocomposite films: Effect of filler content and annealing treatment.

Russo P, Cammarano S, Bilotti E, Peijs T, Cerruti P and Acierno D. *Journal of Applied Polymer Science*.

Poly(lactic acid)/carbon nanotube nanocomposites with integrated degradation sensing.

Mai F, Habibi Y, Raquez J-M, Dubois P, Feller J-F, Peijs T and Bilotti E. *Polymer (United Kingdom)*.

2012

Dynamic percolation in highly oriented conductive networks formed with different carbon nanofillers.

Zhang S, Lin L, Deng H, Gao X, Bilotti E, Peij T, Zhang Q and Fu Q. *Colloid and Polymer Science* vol. 290, (14) 1393-1401.

Measured efficiency of a ZnO nanostructured diode piezoelectric energy harvesting device.

Briscoe J, Bilotti E and Dunn S. *Applied Physics Letters* vol. 101, (9).

Carbon nanotube polymer coatings for textile yarns with good strain sensing capability.

Zhang R, Deng H, Valenca R, Jin J, Fu Q, Bilotti E and Peijs T. *Sensors and Actuators, a: Physical* vol. 179, 83-91.

Theoretical, experimental, and optical coherence tomography (OCT) studies of graft apposition and adhesion in descemets stripping automated endothelial keratoplasty (DSAEK).

Bhagal MS, Angunawela RI, Bilotti E, Eames I and Allan BD. *Investigative Ophthalmology and Visual Science* vol. 53, (7) 3839-3846.

Dependence of surface free energy on molecular orientation in polymer films.

Stachewicz U, Li S, Bilotti E and Barber AH. *Applied Physics Letters* vol. 100, (9).

Synergistic effect in conductive networks constructed with carbon nanofillers in different dimensions.

Zhang SM, Lin L, Deng H, Gao X, Bilotti E, Peijs T, Zhang Q and Fu Q. *Express Polymer Letters* vol. 6, (2) 159-168.

Modified resistivity-strain behavior through the incorporation of metallic particles in conductive polymer composite fibers containing carbon nanotubes.

Lin L, Deng H, Gao X, Zhang S, Bilotti E, Peijs T and Fu Q. *Polymer International*.

Thermal degradation and flammability behavior of polypropylene/clay/carbon nanotube composite systems.

Hapuarachchi TD, Peijs T and Bilotti E. *Polymers For Advanced Technologies*.

Spraying layer-by-layer poly(vinyl alcohol) - Graphene oxide nanocomposites.

Sellam C, Zhai Z, Zahabi H, Cui J, Deng H, Bilotti E and Peijs T. *Eccm 2012 - Composites At Venice, Proceedings of The 15th European Conference On Composite Materials*.

Self-reinforced polylactic acid (PLA) biocomposites with degradation sensing.

Mai F, Palatov K, Bilotti E and Peijs T. *Eccm 2012 - Composites At Venice, Proceedings of The 15th European Conference On Composite Materials*.

2011

Bioinspired layer-by-layer Poly(vinyl alcohol) - Graphene oxide nanocomposites.

Sellam C, Zhai Z, Zahabi H, Deng H, Bilotti E and Peijs T. *Materials Research Society Symposium Proceedings* vol. 1410, 19-24.

Investigation into the structural, morphological, mechanical and thermal behaviour of bacterial cellulose after a two-step purification process.

Gea S, Reynolds CT, Roohpour N, Wirjosentono B, Soykeabkaew N, Bilotti E and Peijs T. *Bioresource Technology* vol. 102, (19) 9105-9110.

Improving tensile strength and toughness of melt processed polyamide 6/multiwalled carbon nanotube composites by in situ polymerization and filler surface functionalization.

Deng H, Bilotti E, Zhang R, Wang K, Zhang Q, Peijs T and Fu Q. *Journal of Applied Polymer Science* vol. 120, (1) 133-140.

The synergistic performance of multiwalled carbon nanotubes and sepiolite nanoclays as flame retardants for unsaturated polyester.

Hapuarachchi TD, Bilotti E, Reynolds CT and Peijs T. *Fire and Materials* vol. 35, (3) 157-169.

The use of polymer-carbon nanotube composites in fibres.

Deng H, Fu Q, Bilotti E and Peijs T.

21 The use of polymer-carbon nanotube composites in fibres.

Deng H, Fu Q, Bilotti E and Peijs T. *Polymer* "Carbon Nanotube Composites".

Contributor contact details.

McNally T, Pötschke P, Kaminsky W, Ruelle B, Bittencourt C, Dubois P, Yang Y-K, Xie X-L, Mai Y-W, Kasaliwal GR, Villmow T, Pegel S, Pötschke P, Li Y, Shimizu H, Lew CY, Dewaghe C, Claes M, Fritzsche J, Lorenz H, Klüppel M, Das A, Jurk R, Stöckelhuber KW, Heinrich G, Kenny JM, Valentini L, Puglia D, Terenzi A and Pegel S. *Polymer* "Carbon Nanotube Composites".

2010

Biodegradable composites based on poly(ϵ -caprolactone) and bacterial cellulose as a reinforcing agent.

Gea S, Reynolds CT, Roohpur N, Soykeabkaew N, Wirjosentono B, Bilotti E and Peijs T. *Journal of Biobased Materials and Bioenergy* vol. 4, (4) 384-390.

Fabrication and property prediction of conductive and strain sensing TPU/CNT nanocomposite fibres.

Bilotti E, Zhang R, Deng H, Baxendale M and Peijs T. *Journal of Materials Chemistry* vol. 20, (42) 9449-9455.

Effective reinforcement of carbon nanotubes in polypropylene matrices.

Deng H, Bilotti E, Zhang R and Peijs T. *Journal of Applied Polymer Science* vol. 118, (1) 30-41.

Effective Modulus of Single- and Multi-Walled Carbon Nanotubes in Melt-Compounded Polycarbonate Nanocomposites.

Wang Z, Bilotti E and Peijs T. *Advanced Composites Letters* vol. 19, (5).

Preparation of high-performance conductive polymer fibers through morphological control of networks formed by nanofillers.

Deng H, Skipa T, Bilotti E, Zhang R, Lellinger D, Mezzo L, Fu Q, Alig I and Peijs T. *Advanced Functional Materials* vol. 20, (9) 1424-1432.

Bacterial cellulose-poly(vinyl alcohol) nanocomposites prepared by an in-situ process.

Gea S, Bilotti E, Reynolds CT, Soykeabkeaw N and Peijs T. *Materials Letters* vol. 64, (8) 901-904.

Effect of thermal annealing on the electrical conductivity of high-strength bicomponent polymer tapes containing carbon nanofillers.

Deng H, Bilotti E, Zhang R, Loos J and Peijs T. *Synthetic Metals* vol. 160, (5-6) 337-344.

Synergistic reinforcement of highly oriented poly(propylene) tapes by sepiolite nanoclay.

Bilotti E, Deng H, Zhang R, Lu D, Bras W, Fischer HR and Peijs T. *Macromolecular Materials and Engineering* vol. 295, (1) 37-47.

EFFECTIVE MODULUS OF SINGLE- AND MULTI-WALLED CARBON NANOTUBES IN MELT-COMPOUNDED POLYCARBONATE NANOCOMPOSITES.

Wang ZJ, Bilotti E and Peijs T. *Adv Compos Lett* vol. 19, (5) 169-174.

Effective modulus of single-and multi-walled carbon nanotubes in melt-compounded polycarbonate nanocomposites.

Wang Z, Bilotti E and Peijs T. *Advanced Composites Letters* vol. 19, (5) 182-187.

Preparation and properties of polyolefin/needle-like clay nanocomposites.

Bilotti E, Ma J and Peijs T. *Advances in Polyolefin Nanocomposites*.

2009

Sepiolite needle-like clay for PA6 nanocomposites: An alternative to layered silicates?.

Bilotti E, Zhang R, Deng H, Quero F, Fischer HR and Peijs T. *Composites Science and Technology* vol. 69, (15-16) 2587-2595.

A novel concept for highly oriented carbon nanotube composite tapes or fibres with high strength and electrical conductivity.

Deng H, Zhang R, Reynolds CT, Bilotti E and Peijs T. *Macromolecular Materials and Engineering* vol. 294, (11) 749-755.

Macromol. Mater. Eng. 11/2009.

Deng H, Zhang R, Reynolds CT, Bilotti E and Peijs T. *Macromolecular Materials and Engineering* vol. 294, (11).

Effect of melting and crystallization on the conductive network in conductive polymer composites.

Deng H, Skipa T, Zhang R, Lellinger D, Bilotti E, Alig I and Peijs T. *Polymer* vol. 50, (15) 3747-3754.

Conductive polymer tape containing highly oriented carbon nanofillers.

Deng H, Zhang R, Bilotti E, Loos J and Peijs T. *Journal of Applied Polymer Science* vol. 113, (2) 742-751.

2008

Polymer nanocomposites based on needle-like sepiolite clays: Effect of functionalized polymers on the dispersion of nanofiller, crystallinity, and mechanical properties.

Bilotti E, Fischer HR and Peijs T. *Journal of Applied Polymer Science* vol. 107, (2) 1116-1123.

2007

Preparation of polypropylene/sepiolite nanocomposites using supercritical CO₂ assisted mixing.

Ma J, Bilotti E, Peijs T and Darr JA. *European Polymer Journal* vol. 43, (12) 4931-4939.