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### 2024

#### **Interfacial engineering of hybrid MXene-Ni-CF tri-coreshell composites for electromagnetic interference shielding and E-heating applications.**

Hu Y, Yang G, Chen J, Li Y, Dong M, Zhang H, Bilotti E, Jiang J and Papageorgiou DG. *Composites Part a Applied Science and Manufacturing* vol. 178,.Elsevier.

#### **Highly conductive and mechanically robust MXene@CF core-shell composites for in-situ damage sensing and electromagnetic interference shielding.**

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#### **Hybrid Ti3C2T x MXene and Carbon Nanotube Reinforced Epoxy Nanocomposites for Self-Sensing and Structural Health Monitoring.**

Dong M, Tomes O, Soul A, Hu Y, Bilotti E, Zhang H and Papageorgiou DG. *Acs Applied Nano Materials* vol. 7, (3) 3314-3325.American Chemical Society (Acs).

#### **Probing Interfacial Interactions in Ternary Nanocomposites of Ti3C2T x MXene Nanoplatelets, Multiwalled Carbon Nanotubes, and Poly(vinyl alcohol) toward Synergistic Reinforcement.**

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#### **A Novel Electrical Depercolation Model for Stretchable Nanocomposite Strain Sensors.**

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### 2023

#### **Micromechanics of Ti3C2Tx MXene reinforced poly(vinyl alcohol) nanocomposites.**

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#### **Tailored Out-of-Oven Energy Efficient Manufacturing of High-Performance Composites with Two-Stage Self-Regulating Heating via a Double Positive Temperature Coefficient Effect.**

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#### **Simultaneous Increase in Dielectric Breakdown Strength and Thermal Conductivity of Oriented UHMWPE Containing Diamond Nanoparticles.**

Yu X, Steiner P, Zhou Q, Kocabas C, Zhang H, Papageorgiou DG, Fenwick O, Yan H, Reece MJ and Bilotti E. *Macromolecules.American Chemical Society.*

**Energy efficient out-of-oven manufacturing of natural fibre composites with integrated sensing capabilities and improved water barrier properties.**

Wang Y, Yao X, Thorn TDS, Huo S, Porwal H, Newton M, Liu Y, Papageorgiou D, Bilotti E and Zhang H. *Composites Science and Technology* vol. 239,.Elsevier.

**Smart Skins Based on Assembled Piezoresistive Networks of Sustainable Graphene Microcapsules for High Precision Health Diagnostics.**

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**Interfacial stress transfer in monolayer and few-layer MoS<sub>2</sub> nanosheets in model nanocomposites.**

Dong M, Young RJ, Dunstan DJ and Papageorgiou DG. *Composites Science and Technology* vol. 233,.Elsevier.

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**Aromatic But Sustainable: Poly(butylene 2, 5-furandicarboxylate) as a Crystallizing Thermoplastic in the Bioeconomy.**

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**Graphene Nanoplatelets as a Replacement for Carbon Black in Rubber Compounds.**

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## Significant interlayer coupling in bilayer graphene and double-walled carbon nanotubes: A refinement of obtaining strain in low-dimensional materials.

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

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

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### Deformation and tearing of graphene-reinforced elastomer nanocomposites.

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### A new era in engineering plastics: Compatibility and perspectives of sustainable aliphatic poly(ethylene terephthalate)/poly(ethylene 2,5-furandicarboxylate) blends.

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### Towards increased sustainability for aromatic polyesters: Poly(butylene 2,5-furandicarboxylate) and its blends with poly(butylene terephthalate).

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**GraphenePolyurethane Coatings for Deformable Conductors and Electromagnetic Interference Shielding.**  
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**Multifunctional Biocomposites Based on Polyhydroxyalkanoate and Graphene/Carbon Nanofiber Hybrids for Electrical and Thermal Applications.**

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**Tuning the properties of furandicarboxylic acid-based polyesters with copolymerization: A review.**

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**Anisotropic swelling of elastomers filled with aligned 2D materials.**

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**Realising biaxial reinforcement: Via orientation-induced anisotropic swelling in graphene-based elastomers.**

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**Modelling mechanical percolation in graphene-reinforced elastomer nanocomposites.**

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**PMMA-grafted graphene nanoplatelets to reinforce the mechanical and thermal properties of PMMA composites.**

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**The strength of mechanically-exfoliated monolayer graphene deformed on a rigid polymer substrate.**

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**Exploring Next-Generation Engineering Bioplastics: Poly(alkylene furanoate)/Poly(alkylene terephthalate) (PAF/PAT) Blends.**

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**Sustainable thermoplastics from renewable resources: Thermal behavior of poly(1,4-cyclohexane dimethylene 2,5-furandicarboxylate).**

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**Hydrogel matrices based on elastin and alginate for tissue engineering applications.**  
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**Hybrid multifunctional graphene/glass-fibre polypropylene composites.**

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**Soft-matrices based on silk fibroin and alginate for tissue engineering.**

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