

Federico Carosio

List of Publications by Year in descending order

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Version: 2024-02-01

103
papers

7,276
citations

53794

45
h-index

54911

84
g-index

105
all docs

105
docs citations

105
times ranked

4991
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Thermally insulating and fire-retardant lightweight anisotropic foams based on nanocellulose and graphene oxide. <i>Nature Nanotechnology</i> , 2015, 10, 277-283. | 31.5 | 1,103 |
| 2 | Phosphorylated Cellulose Nanofibrils: A Renewable Nanomaterial for the Preparation of Intrinsically Flame-Retardant Materials. <i>Biomacromolecules</i> , 2015, 16, 3399-3410. | 5.4 | 267 |
| 3 | DNA: a novel, green, natural flame retardant and suppressant for cotton. <i>Journal of Materials Chemistry A</i> , 2013, 1, 4779. | 10.3 | 259 |
| 4 | Current emerging techniques to impart flame retardancy to fabrics: An Overview. <i>Polymer Degradation and Stability</i> , 2014, 106, 138-149. | 5.8 | 240 |
| 5 | Caseins and hydrophobins as novel green flame retardants for cotton fabrics. <i>Polymer Degradation and Stability</i> , 2014, 99, 111-117. | 5.8 | 218 |
| 6 | Layer-by-layer assembly of silica-based flame retardant thin film on PET fabric. <i>Polymer Degradation and Stability</i> , 2011, 96, 745-750. | 5.8 | 215 |
| 7 | Layer by Layer ammonium polyphosphate-based coatings for flame retardancy of polyester-cotton blends. <i>Carbohydrate Polymers</i> , 2012, 88, 1460-1469. | 10.2 | 196 |
| 8 | Green DNA-based flame retardant coatings assembled through Layer by Layer. <i>Polymer</i> , 2013, 54, 5148-5153. | 3.8 | 183 |
| 9 | Nanostructured Wood Hybrids for Fire-Retardancy Prepared by Clay Impregnation into the Cell Wall. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 36154-36163. | 8.0 | 175 |
| 10 | Starch-Based Layer by Layer Assembly: Efficient and Sustainable Approach to Cotton Fire Protection. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 12158-12167. | 8.0 | 170 |
| 11 | Intrinsic intumescent-like flame retardant properties of DNA-treated cotton fabrics. <i>Carbohydrate Polymers</i> , 2013, 96, 296-304. | 10.2 | 168 |
| 12 | Biomacromolecules as novel green flame retardant systems for textiles: an overview. <i>RSC Advances</i> , 2014, 4, 46024-46039. | 3.6 | 142 |
| 13 | Materials engineering for surface-confined flame retardancy. <i>Materials Science and Engineering Reports</i> , 2014, 84, 1-20. | 31.8 | 139 |
| 14 | Layer by layer complex architectures based on ammonium polyphosphate, chitosan and silica on polyester-cotton blends: flammability and combustion behaviour. <i>Cellulose</i> , 2012, 19, 1041-1050. | 4.9 | 129 |
| 15 | Flame Retardancy of Polyester and Polyester-Cotton Blends Treated with Caseins. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 3917-3923. | 3.7 | 122 |
| 16 | Thermal stability and flame retardancy of polyester, cotton, and relative blend textile fabrics subjected to sol-gel treatments. <i>Journal of Applied Polymer Science</i> , 2011, 119, 1961-1969. | 2.6 | 118 |
| 17 | Zirconium phosphate-based nanoarchitectures on polyester fabrics through layer-by-layer assembly. <i>Journal of Materials Chemistry</i> , 2011, 21, 10370. | 6.7 | 113 |
| 18 | Growth and fire resistance of colloidal silica-polyelectrolyte thin film assemblies. <i>Journal of Colloid and Interface Science</i> , 2011, 356, 69-77. | 9.4 | 109 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Oriented Clay Nanopaper from Biobased Componentsâ€”Mechanisms for Superior Fire Protection Properties. ACS Applied Materials & Interfaces, 2015, 7, 5847-5856. | 8.0 | 108 |
| 20 | Tuning the Nanocelluloseâ€”Borate Interaction To Achieve Highly Flame Retardant Hybrid Materials. Chemistry of Materials, 2016, 28, 1985-1989. | 6.7 | 103 |
| 21 | Superior Flame-Resistant Cellulose Nanofibril Aerogels Modified with Hybrid Layer-by-Layer Coatings. ACS Applied Materials & Interfaces, 2017, 9, 29082-29092. | 8.0 | 99 |
| 22 | Optimization of the procedure to burn textile fabrics by cone calorimeter: Part I. Combustion behavior of polyester. Fire and Materials, 2011, 35, 397-409. | 2.0 | 97 |
| 23 | Ultra-Fast Layer-by-Layer Approach for Depositing Flame Retardant Coatings on Flexible PU Foams within Seconds. ACS Applied Materials & Interfaces, 2016, 8, 6315-6319. | 8.0 | 97 |
| 24 | Efficient Gas and Water Vapor Barrier Properties of Thin Poly(lactic acid) Packaging Films: Functionalization with Moisture Resistant Nafion and Clay Multilayers. Chemistry of Materials, 2014, 26, 5459-5466. | 6.7 | 94 |
| 25 | Flame-Retardant Paper from Wood Fibers Functionalized via Layer-by-Layer Assembly. ACS Applied Materials & Interfaces, 2015, 7, 23750-23759. | 8.0 | 92 |
| 26 | Layer-by-layer assembly of efficient flame retardant coatings based on high aspect ratio graphene oxide and chitosan capable of preventing ignition of PU foam. Polymer Degradation and Stability, 2018, 152, 1-9. | 5.8 | 92 |
| 27 | All-natural and highly flame-resistant freeze-cast foams based on phosphorylated cellulose nanofibrils. Nanoscale, 2018, 10, 4085-4095. | 5.6 | 87 |
| 28 | Influence of ammonium polyphosphate-/poly(acrylic acid)-based layer by layer architectures on the char formation in cotton, polyester and their blends. Polymer Degradation and Stability, 2012, 97, 1644-1653. | 5.8 | 84 |
| 29 | Layer by Layer coatings assembled through dipping, vertical or horizontal spray for cotton flame retardancy. Carbohydrate Polymers, 2013, 92, 114-119. | 10.2 | 83 |
| 30 | Extreme Heat Shielding of Clay/Chitosan Nanobrick Wall on Flexible Foam. ACS Applied Materials & Interfaces, 2018, 10, 31686-31696. | 8.0 | 81 |
| 31 | Clay nanopaper as multifunctional brick and mortar fire protection coatingâ€”Wood case study. Materials and Design, 2016, 93, 357-363. | 7.0 | 80 |
| 32 | Influence of surface activation by plasma and nanoparticle adsorption on the morphology, thermal stability and combustion behavior of PET fabrics. European Polymer Journal, 2011, 47, 893-902. | 5.4 | 73 |
| 33 | Flame Retardancy of Polyester Fabrics Treated by Spray-Assisted Layer-by-Layer Silica Architectures. Industrial & Engineering Chemistry Research, 2013, 52, 9544-9550. | 3.7 | 71 |
| 34 | Flammability and combustion properties of ammonium polyphosphate-/poly(acrylic acid)- based layer by layer architectures deposited on cotton, polyester and their blends. Polymer Degradation and Stability, 2013, 98, 1626-1637. | 5.8 | 71 |
| 35 | Controlling the melt dripping of polyester fabrics by tuning the ionic strength of polyhedral oligomeric silsesquioxane and sodium montmorillonite coatings assembled through Layer by Layer. Journal of Colloid and Interface Science, 2018, 510, 142-151. | 9.4 | 65 |
| 36 | Layer-by-layer-assembled chitosan/phosphorylated cellulose nanofibrils as a bio-based and flame protecting nano-exoskeleton on PU foams. Carbohydrate Polymers, 2018, 202, 479-487. | 10.2 | 64 |

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|----|--|------|-----------|
| 37 | Intumescent features of nucleic acids and proteins. <i>Thermochimica Acta</i> , 2014, 591, 31-39. | 2.7 | 63 |
| 38 | Bulk or surface treatments of ethylene vinyl acetate copolymers with DNA: Investigation on the flame retardant properties. <i>European Polymer Journal</i> , 2014, 51, 112-119. | 5.4 | 60 |
| 39 | Graphene Oxide Exoskeleton to Produce Self-Extinguishing, Nonignitable, and Flame Resistant Flexible Foams: A Mechanically Tough Alternative to Inorganic Aerogels. <i>Advanced Materials Interfaces</i> , 2018, 5, 1801288. | 3.7 | 59 |
| 40 | Few durable layers suppress cotton combustion due to the joint combination of layer by layer assembly and UV-curing. <i>RSC Advances</i> , 2015, 5, 71482-71490. | 3.6 | 52 |
| 41 | Thermal stability and flame retardancy of polyester fabrics sol-gel treated in the presence of boehmite nanoparticles. <i>Polymer Degradation and Stability</i> , 2013, 98, 1609-1616. | 5.8 | 51 |
| 42 | Linear polyamidoamines as novel biocompatible phosphorus-free surface-confined intumescent flame retardants for cotton fabrics. <i>Polymer Degradation and Stability</i> , 2018, 151, 52-64. | 5.8 | 51 |
| 43 | DNA Coatings from Byproducts: A Panacea for the Flame Retardancy of EVA, PP, ABS, PET, and PA6?. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 3544-3551. | 6.7 | 48 |
| 44 | UV-cured hybrid organic-inorganic Layer by Layer assemblies: Effect on the flame retardancy of polycarbonate films. <i>Polymer Degradation and Stability</i> , 2014, 107, 74-81. | 5.8 | 47 |
| 45 | Layer by layer nanoarchitectures for the surface protection of polycarbonate. <i>European Polymer Journal</i> , 2013, 49, 397-404. | 5.4 | 45 |
| 46 | Layer by layer assembly of flame retardant thin films on closed cell PET foams: Efficiency of ammonium polyphosphate versus DNA. <i>Polymer Degradation and Stability</i> , 2015, 113, 189-196. | 5.8 | 45 |
| 47 | Recent Advances in the Design of Water Based-Flame Retardant Coatings for Polyester and Polyester-Cotton Blends. <i>Polymers</i> , 2016, 8, 357. | 4.5 | 43 |
| 48 | Disulfide-containing polyamidoamines with remarkable flame retardant activity for cotton fabrics. <i>Polymer Degradation and Stability</i> , 2018, 156, 1-13. | 5.8 | 43 |
| 49 | A Comparative Analysis of Nanoparticle Adsorption as Fire-Protection Approach for Fabrics. <i>Polymers</i> , 2015, 7, 47-68. | 4.5 | 42 |
| 50 | Tunable thermal and flame response of phosphonated oligoallylamines layer by layer assemblies on cotton. <i>Carbohydrate Polymers</i> , 2015, 115, 752-759. | 10.2 | 42 |
| 51 | Sustainable and High Performing Biocomposites with Chitosan/Sepiolite Layer-by-Layer Nanoengineered Interphases. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 9601-9605. | 6.7 | 42 |
| 52 | Self-assembled hybrid nanoarchitectures deposited on poly(urethane) foams capable of chemically adapting to extreme heat. <i>RSC Advances</i> , 2014, 4, 16674-16680. | 3.6 | 39 |
| 53 | All-polymer Layer by Layer coating as efficient solution to polyurethane foam flame retardancy. <i>European Polymer Journal</i> , 2015, 70, 94-103. | 5.4 | 38 |
| 54 | Layer-by-Layer nanostructured interphase produces mechanically strong and flame retardant bio-composites. <i>Composites Part B: Engineering</i> , 2020, 200, 108310. | 12.0 | 38 |

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|----|---|------|-----------|
| 55 | Flame Retardant Multilayered Coatings on Acrylic Fabrics Prepared by One-Step Deposition of Chitosan/Montmorillonite Complexes. <i>Fibers</i> , 2018, 6, 36. | 4.0 | 37 |
| 56 | Influence of layer by layer coatings containing octapropylammonium polyhedral oligomeric silsesquioxane and ammonium polyphosphate on the thermal stability and flammability of acrylic fabrics. <i>Journal of Analytical and Applied Pyrolysis</i> , 2016, 119, 114-123. | 5.5 | 34 |
| 57 | Ice-templated nanocellulose porous structure enhances thermochemical storage kinetics in hydrated salt/graphite composites. <i>Renewable Energy</i> , 2020, 160, 698-706. | 8.9 | 32 |
| 58 | Ultrastrong and flame-resistant freestanding films from nanocelluloses, self-assembled using a layer-by-layer approach. <i>Applied Materials Today</i> , 2017, 9, 229-239. | 4.3 | 31 |
| 59 | Tuning the Nanoscale Properties of Phosphorylated Cellulose Nanofibril-Based Thin Films To Achieve Highly Fire-Protecting Coatings for Flammable Solid Materials. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 32543-32555. | 8.0 | 31 |
| 60 | Strong reinforcement effects in 2D cellulose nanofibril-graphene oxide (CNF-graphene oxide) nanocomposites due to GO-induced CNF ordering. <i>Journal of Materials Chemistry A</i> , 2020, 8, 17608-17620. | 10.3 | 31 |
| 61 | Extreme Thermal Shielding Effects in Nanopaper Based on Multilayers of Aligned Clay Nanoplatelets in Cellulose Nanofiber Matrix. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600551. | 3.7 | 30 |
| 62 | Superior flame retardancy of cotton by synergetic effect of cellulose-derived nano-graphene oxide carbon dots and disulphide-containing polyamidoamines. <i>Polymer Degradation and Stability</i> , 2019, 169, 108993. | 5.8 | 27 |
| 63 | How much the fabric grammage may affect cotton combustion?. <i>Cellulose</i> , 2015, 22, 3477-3489. | 4.9 | 25 |
| 64 | Tailoring flame-retardancy and strength of papers via layer-by-layer treatment of cellulose fibers. <i>Cellulose</i> , 2018, 25, 2691-2709. | 4.9 | 25 |
| 65 | Three Organic/Inorganic Nanolayers on Flexible Foam Allow Retaining Superior Flame Retardancy Performance Upon Mechanical Compression Cycles. <i>Frontiers in Materials</i> , 2019, 6, . | 2.4 | 25 |
| 66 | Nanocomposites from Clay, Cellulose Nanofibrils, and Epoxy with Improved Moisture Stability for Coatings and Semistructural Applications. <i>ACS Applied Nano Materials</i> , 2019, 2, 3117-3126. | 5.0 | 24 |
| 67 | Hydrated Salt/Graphite/Polyelectrolyte Organic-Inorganic Hybrids for Efficient Thermochemical Storage. <i>Nanomaterials</i> , 2019, 9, 420. | 4.1 | 24 |
| 68 | Layer by Layer-functionalized rice husk particles: A novel and sustainable solution for particleboard production. <i>Materials Today Communications</i> , 2017, 13, 92-101. | 1.9 | 23 |
| 69 | Effects of Graphite Oxide Nanoparticle Size on the Functional Properties of Layer-by-Layer Coated Flexible Foams. <i>Nanomaterials</i> , 2021, 11, 266. | 4.1 | 23 |
| 70 | Recent Advances in Multi-Functional Coatings for Soft Magnetic Composites. <i>Materials</i> , 2021, 14, 6844. | 2.9 | 22 |
| 71 | New bio-based phosphorylated chitosan/alginate protective coatings on aluminum alloy obtained by the LbL technique. <i>Surfaces and Interfaces</i> , 2019, 16, 59-66. | 3.0 | 21 |
| 72 | Layer-by-layer modified low density cellulose fiber networks: A sustainable and fireproof alternative to petroleum based foams. <i>Carbohydrate Polymers</i> , 2020, 230, 115616. | 10.2 | 21 |

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|----|---|------|-----------|
| 73 | Recyclable nanocomposite foams of Poly(vinyl alcohol), clay and cellulose nanofibrils – Mechanical properties and flame retardancy. <i>Composites Science and Technology</i> , 2019, 182, 107762. | 7.8 | 19 |
| 74 | Charge Regulated Diffusion of Silica Nanoparticles into Wood for Flame Retardant Transparent Wood. <i>Advanced Sustainable Systems</i> , 2022, 6, . | 5.3 | 19 |
| 75 | Improving the Flame Retardant Efficiency of Layer by Layer Coatings Containing Deoxyribonucleic Acid by Post-Diffusion of Hydrotalcite Nanoparticles. <i>Materials</i> , 2017, 10, 709. | 2.9 | 18 |
| 76 | Improving Mechanical Properties and Reaction to Fire of EVA/LLDPE Blends for Cable Applications with Melamine Triazine and Bentonite Clay. <i>Materials</i> , 2019, 12, 2393. | 2.9 | 17 |
| 77 | Recyclable nanocomposites of well-dispersed 2D layered silicates in cellulose nanofibril (CNF) matrix. <i>Carbohydrate Polymers</i> , 2022, 279, 119004. | 10.2 | 17 |
| 78 | Permeation Behavior of Polysulfone Membranes Modified by Fully Organic Layer-by-Layer Assemblies. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 16406-16413. | 3.7 | 16 |
| 79 | Phosphonated oligoallylamine: Synthesis, characterization in water, and development of layer by layer assembly. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 1244-1251. | 2.1 | 15 |
| 80 | The use of model cellulose gel beads to clarify flame-retardant characteristics of layer-by-layer nano-coatings. <i>Carbohydrate Polymers</i> , 2021, 255, 117468. | 10.2 | 15 |
| 81 | All-Inorganic Intumescent Nanocoating Containing Montmorillonite Nanoplatelets in Ammonium Polyphosphate Matrix Capable of Preventing Cotton Ignition. <i>Polymers</i> , 2016, 8, 430. | 4.5 | 14 |
| 82 | In Situ Assembly of DNA/Graphene Oxide Nanoplates to Reduce the Fire Threat of Flexible Foams. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101083. | 3.7 | 14 |
| 83 | Assembly of chitosan-graphite oxide nanoplatelets core shell microparticles for advanced 3D scaffolds supporting neuronal networks growth. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 196, 111295. | 5.0 | 13 |
| 84 | Green and Fire Resistant Nanocellulose/Hemicellulose/Clay Foams. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101111. | 3.7 | 13 |
| 85 | Silica-encapsulated red phosphorus for flame retardant treatment on textile. <i>Surfaces and Interfaces</i> , 2021, 25, 101252. | 3.0 | 13 |
| 86 | Flame Retardant Properties of Ethylene Vinyl Acetate Copolymers Melt-Compounded with Deoxyribonucleic Acid in the Presence of –cellulose or –cyclodextrins. <i>Current Organic Chemistry</i> , 2014, 18, 1651-1660. | 1.6 | 13 |
| 87 | Polyamidoamines Derived from Natural –Amino Acids as Effective Flame Retardants for Cotton. <i>Polymers</i> , 2021, 13, 3714. | 4.5 | 13 |
| 88 | A facile approach for the development of high mechanical strength 3D neuronal network scaffold based on chitosan and graphite nanoplatelets. <i>Carbohydrate Polymers</i> , 2021, 271, 118420. | 10.2 | 12 |
| 89 | Sulfur-Based Copolymeric Polyamidoamines as Efficient Flame-Retardants for Cotton. <i>Polymers</i> , 2019, 11, 1904. | 4.5 | 11 |
| 90 | Graphite oxide nanocoatings as a sustainable route to extend the applicability of biopolymer-based film. <i>Applied Surface Science</i> , 2020, 522, 146471. | 6.1 | 11 |

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|-----|--|-----|-----------|
| 91 | The Thermo-Oxidative Behavior of Cotton Coated with an Intumescent Flame Retardant Glycine-Derived Polyamidoamine: A Multi-Technique Study. <i>Polymers</i> , 2021, 13, 4382. | 4.5 | 11 |
| 92 | Ring opening metathesis polymerization (ROMP) and thioâ€bromo â€œclickâ€ chemistry approach toward the preparation of flameâ€retardant polymers. <i>Journal of Polymer Science Part A</i> , 2018, 56, 645-652. | 2.3 | 10 |
| 93 | Polyelectrolyte-Coated Mesoporous Bioactive Glasses via Layer-by-Layer Deposition for Sustained Co-Delivery of Therapeutic Ions and Drugs. <i>Pharmaceutics</i> , 2021, 13, 1952. | 4.5 | 10 |
| 94 | Impact of polymeric stabilisers on the reaction kinetics of SrBr ₂ . <i>Solar Energy Materials and Solar Cells</i> , 2022, 238, 111648. | 6.2 | 9 |
| 95 | Polyelectrolyte-Assisted Dispersions of Reduced Graphite Oxide Nanoplates in Water and Their Gas-Barrier Application. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 43301-43313. | 8.0 | 7 |
| 96 | Rapid Characterization Method for SMC Materials for a Preliminary Selection. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 12133. | 2.5 | 7 |
| 97 | Polypropylene-based ferromagnetic composites. <i>Polymer Bulletin</i> , 2010, 65, 681-689. | 3.3 | 5 |
| 98 | Bench-scale fire stability testing â€ Assessment of protective systems on carbon fibre reinforced polymer composites. <i>Polymer Testing</i> , 2021, 102, 107340. | 4.8 | 4 |
| 99 | A statistical approach to the development of flame retardant and mechanically strong natural fibers biocomposites. <i>Polymer Degradation and Stability</i> , 2022, 201, 109991. | 5.8 | 3 |
| 100 | A dielectric study on colloidal silica nanoparticle Layer-by-Layer assemblies on polycarbonate. <i>Journal of Colloid and Interface Science</i> , 2013, 408, 252-255. | 9.4 | 2 |
| 101 | Rapidly Prepared Nanocellulose Hybrids as Gas Barrier, Flame Retardant, and Energy Storage Materials. <i>ACS Applied Nano Materials</i> , 0, , . | 5.0 | 2 |
| 102 | Textile Flame Retardancy Through Surface-Assembled Nanoarchitectures. <i>ACS Symposium Series</i> , 2012, , 327-341. | 0.5 | 1 |
| 103 | A Technology Platform For the Sustainable Recovery and Advanced Use of Nanostructured Cellulose from Agri-Food Residues (PANACEA Project). , 2020, 69, . | | 0 |