Europass Curriculum Vitae



Personal information

First name(s) / Surname(s)	**Luciano Di Maio**
Address(es)	Department of Industrial Engineering – University of Salerno. Via Giovanni Paolo II, 84084 Fisciano (SA) - Italy
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Nationality	Italian
Gender	male

Occupation

Full Professor of Materials Science and Technology

Work experience

Dates	2020 up to now
Occupation or position held	**Full Professor of Materials Science and Technology**
Main activities and responsibilities	Teaching, Research
Name and address of employer	**University of Salerno – Department of Industrial Engineering (Italy)**
Type of business or sector	Education

Dates	2004 - 2020
Occupation or position held	**Associate Professor of Materials Science and Technology**
Main activities and responsibilities	Research, Teaching
Name and address of employer	**University of Salerno – Department of Chemical and Food Engineering (Italy)**
Type of business or sector	Education

Education and training

Dates	May 1998
Title of qualification awarded	**PhD in Chemical and New Materials Technologies**
Principal subjects/occupational skills covered	Polymer processing – multilayers' film production technologies
Name and type of organisation providing education and training	University of Palermo (Italy)
International Standard Classification of Education (ISCED2011)	8

Dates	November 1991
Title of qualification awarded	**Master Degree in Industrial Technologies Engineering**
Principal subjects/occupational skills covered	Mechanical recycling of polymers
Name and type of organisation providing education and training	University of Salerno (Italy)
International Standard Classification of Education (ISCED2011)	7

Personal skills and competences

Mother tongue(s) **Italian**

Other language(s) **English**

Self-assessment	Understanding		Speaking		Writing
European level (*)	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1

(*) Common European Framework of Reference for Languages

Social skills and competences	Listening skills, Cooperating with others, Communication competence, Problem-solving
Organisational skills and competences	Advanced experience in project and team management. Critical Thinking, Prioritizing and Planning
Technical skills and competences	Analysis of complex data. Polymer processing and characterization. Design and development of new materials and systems. Eco-friendliness, sustainability and recycling of materials. Technical and proposal writing. Undergraduate and post-graduate student instruction.
Computer skills and competences	Proficient with Windows Operating systems, Office suites (Microsoft Office, Adobe Acrobat, G Suite), Presentation and Spreadsheets software (Excel, PowerPoint), Communication and collaboration tools (TEAMS, Skype, Zoom), E-learning platform (Moodle)
Driving licence	Category A and B

Additional information

(continue)

INVOLVMENT IN RESEARCH PROJECT ACTIVITIES (LAST THREE YEARS)

- Erasmus+ “PackAlliance / European alliance for innovation training & collaboration towards future packaging, 612212” (Call: EAC/A03/2018, KA2: Cooperation for innovation and the exchange of good practices). Duration: January 2020 – December 2022. Role: component of Research Unit.
- Project "Production and Characterization of recycled polymer blends for pallets and related modeling" (REPULP S.r.l., 24 months). Role: component of Research Unit.
- Project “Recycling of post-consumer polymers for production of nanocomposite systems” (CONAI, 24 months). Role: component of Research Unit.
- Triennial research projects (PON02_00029_3206010 "TECOP - TECNOLOGIE DI PRODUZIONE DI COMPOSTI A MATRICE POLIMERICA"; PON01_00519 “SCILLA-M Strutture, Componenti Innovativi Light per Applicazioni Metro”; PON PON01_01409 “SAFEMEAT - Process and product innovations to increase safety profiles and to diversify the range of fresh and cured pork products). Role: Local Scientific Manager.
- Project “Made in Italy - Development of innovative polymer packaging for high quality food and on-line measuring techniques for the optimization and control of the related production processes” (MISE, cod. MI01_00311); (24 months). Role: component of Research Unit.
- Project “Applications, processing and modification of PHB’s” – BIO-on S.p.A. 12 months. Role: scientific manager.
- Project “Production and characterization of biodegradable polymer blends” – BIO VALORE WORLD, 12 months. Role: scientific manager.

RECENT ADDITIONAL COMMITMENTS

- Past Member of the Board of Directors of IMAST s.c.a.r.l. (Technological district for the engineering of composite, polymeric materials and structures)
- Member of (CTS) Technical - Scientific Committee of IMAST s.c.a.r.l. (Technological district for the engineering of composite, polymeric materials and structures)
- Member of the Scientific Committee of the University Master "MATESPACK - Sustainable Materials and Technologies for Polymeric and Cellulosic Packaging"
- Member of the University Coordination Committee for training courses aimed at the acquisition of 24 CFU for teaching qualification

Additional information

RESEARCH INTERESTS

Professor Di Maio carries out research activities within in the field of Science and Technology of Materials). His scientific interests are focused on various aspects related to the sustainability and circularity of polymeric materials. In particular, it has to be mentioned the following topics :
• analysis of the processing technologies of nanocomposite polymeric systems
• preparation and characterization of new packaging materials
• recycling and upgrading of end-of-waste polymeric materials
• compounding and blending technologies for new and sustainable polymeric systems
• green materials: processing and characterization of bio based polymers
• thermoplastic blends and composites for improved recyclability and sustainability
• use of polymeric materials to improve the performance of mortars and concrete
The research activities are aimed at the experimental analysis of the behaviour of materials in relation to the composition and process and production parameters. Aspects relating to the identification and optimization of technologies and processing parameters that can be industrially reproduced as part of the transformation processes of thermoplastic polymeric materials such as extrusion, mixing, filming, spinning, foaming are therefore studied with a specific attention to recycled/recyclable/eco friendly materials..
The fields of investigation are focused on the application of the results in the field of new polymeric systems for the packaging, in the field of flexible films for food packaging (improvement of specific functional properties for food packaging), in the study of new biodegradable materials, in the analysis of the sustainability and recyclability of post-consumer polymers.

SCOPUS BIBLIOMETRIC INDICATORS:

Documents: 138
H Index: 34
Citations: 3570

Recent publications

(1) Barbato, A.; Palmieri, F.; Garofalo, E.; Apicella, A.; Incarnato, L.; **Di Maio, L.** *Design and Processing of Novel PBS/PVOH Blown Films for Food Packaging: Effect of PVOH Phase Structuring on Morphology and Functional Performance.* Polymers 2026, 18 (11). https://doi.org/10.3390/polym18111367.

(2) Gravina, G.; Tagoe, J. N. A.; Di Girolamo, R.; Gentile, M.; **Di Maio, L.**; Pellecchia, C. *Sustainable Thermoplastic Elastomers from Commercial Cyclic Esters: One-Pot Synthesis of Poly(l-Lactide)-b-(δ-Hexalactone-Stat-ε-Caprolactone)-b-(l-Lactide) and Its Chemical Recycling to the Monomers.* ACS Polymers Au 2026, 6 (1), 468–479. https://doi.org/10.1021/acspolymersau.5c00172.

(3) Orisaya-Taiwo, S. O.; Incarnato, L.; Amendola, E.; Dello Iacono, S.; **Di Maio, L.** *A Synergistic Approach to Sustainable Packaging: Exploring Mater-Bi®/PHBV Multilayer Systems.* Polymers 2026, 18 (6). https://doi.org/10.3390/polym18060692.

(4) Corrado, F.; **Di Maio, L.**; Palmero, P.; Coppola, B.; Abbas, Z.; La Gatta, A.; Schiraldi, C.; Scarfato, P. *Vat Photo-Polymerization 3D Printing of Gradient Scaffolds for Osteochondral Tissue Regeneration.* Acta Biomaterialia 2025, 200, 67–86. https://doi.org/10.1016/j.actbio.2025.05.042.

(5) Garofalo, E.; **Di Maio, L.**; Incarnato, L. *PLA/PBS Biocomposites for 3D FDM Manufacturing: Effect of Hemp Shive Content and Process Parameters on Printing Quality and Performances.* Polymers 2025, 17 (17). https://doi.org/10.3390/polym17172280.

(6) Garofalo, E.; **Di Maio, L.**; Scarfato, P.; Vitiello, L.; Incarnato, L. *Mechanical Recycling of Poly(Butylene Succinate)/Poly(Lactide) Blends: Assessment of Film Blowing Processability and Film Performances after Multiple Extrusions.* Chemical Engineering Journal 2025, 505. https://doi.org/10.1016/j.cej.2025.159823.

(7) Lombardi, R.; Pepe, M.; Paolillo, B.; **Di Maio, L.**; Martinelli, E. *Bond Behaviour of Flax and Jute PLA Coated Fibers Embedded in Lime-Based Mortar.* RILEM Bookseries 2025, 60, 459–474. https://doi.org/10.1007/978-3-031-92777-5_37.

(8) Marchetta, F.; D'Arienzo, L.; **Di Maio, L.**; Botta, L.; Mistretta, M. C.; Rizzarelli, P.; Leanza, M.; Scarfato, P. *Sustainable Biocomposites from Polybutylene Succinate Reinforced with Glochids: Combining Waste Valorization with Improved Material Properties and Accelerated Biodegradability.* Composites Communications 2025, 59. https://doi.org/10.1016/j.coco.2025.102597.

(9) D'Arienzo, L.; Acierno, S.; Patti, A.; **Di Maio, L.** *Cellulose/Polyhydroxybutyrate (PHB) Composites as a Sustainable Bio-Based Feedstock to 3D-Printing Applications.* Materials 2024, 17 (4). https://doi.org/10.3390/ma17040916.

(10) Lombardi, R.; **Di Maio, L.**; Pepe, M.; Paolillo, B.; Martinelli, E. *Influence of PLA Impregnation on the Performances of Vegetable Fibers for Lime-Based Composites;* 2024; Vol. 64, pp 1919–1926. https://doi.org/10.1016/j.prostr.2024.09.258.

(11) Palmieri, F.; Tagoe, J. N. A.; **Di Maio, L.** *Development of PBS/Nano Composite PHB-Based Multilayer Blown Films with Enhanced Properties for Food Packaging Applications.* Materials 2024, 17 (12). https://doi.org/10.3390/ma17122894.

(12) Coppola, L.; Bellezze, T.; Belli, A.; Bianco, A.; Blasi, E.; Cappello, M.; Caputo, D.; Chougan, M.; Coffetti, D.; Coppola, B.; Corinaldesi, V.; D'Amore, A.; Daniele, V.; **Di Maio, L.**; Di Palma, L.; Donnini, J.; Ferrara, G.; Filippi, S.; Gastaldi, M.; Generosi, N.; Giosuè, C.; Incarnato, L.; Lamastra, F.; Liguori, B.; Macera, L.; Maqbool, Q.; Mascolo, M. C.; Mavilia, L.; Mazzoli, A.; Medici, F.; Mobili, A.; Montesperelli, G.; Pia, G.; Redaelli, E.; Ruello, M. L.; Scarfato, P.; Taglieri, G.; Tittarelli, F.; Tulliani, J.-M.; Valenza, A. *New Materials and Technologies for Durability and Conservation of Building Heritage.* Materials 2023, 16 (3). https://doi.org/10.3390/ma16031190.

(13) Garofalo, E.; **Di Maio, L.**; Scarfato, P.; Russo, P.; Incarnato, L. *Selective Localization of Nanoparticles to Enhance the Properties of PBS/PLA Nanocomposite Blown Films.* Journal of Polymers and the Environment 2023, 31 (10), 4546–4558. https://doi.org/10.1007/s10924-023-02883-1.

(14) Garofalo, E.; Taurino, L.; **Di Maio, L.**; Neitzert, H. C.; Incarnato, L. *Assessment of Melt Compounding with Zeolites as an Effective Deodorization Strategy for Mixed Plastic Wastes and Comparison with Degassing.* Polymers 2023, 15 (8). https://doi.org/10.3390/polym15081858.

(15) Ferraioli, R.; Incarnato, L.; **Maio, L. D.**; Scarfato, P. *Investigation of an Upcycling Strategy for Mixed Plastic Wastes from Urban Collection.* Macromolecular Symposia 2022, 405 (1). https://doi.org/10.1002/masy.202100258.

(16) Pietrosanto, A.; Apicella, A.; Scarfato, P.; Incarnato, L.; **Di Maio, L.** *Development of Novel Blown Shrink Films from Poly(Lactide)/Poly(Butylene-Adipate-Co-Terephthalate) Blends for Sustainable Food Packaging Applications.* Polymers 2022, 14 (14). https://doi.org/10.3390/polym14142759.

(17) Pietrosanto, A.; Scarfato, P.; **Maio, L. D.**; Incarnato, L. *Effect of Cooling Air in the Film Blowing Process on the Properties of PLA/PBAT Films.* Macromolecular Symposia 2022, 405 (1). https://doi.org/10.1002/masy.202100251.

(18) Scarfato, P.; Graziano, M. L.; Pietrosanto, A.; **Di Maio, L.**; Incarnato, L. *Use of Hazelnut Perisperm as an Antioxidant for Production of Sustainable Biodegradable Active Films.* Polymers 2022, 14 (19). https://doi.org/10.3390/polym14194156.

(19) Ferraioli, R.; **Di Maio, L.**; Incarnato, L.; Scarfato, P. *Development of Recycled Blown Films Based on Post-Consumer Plastics Recovered from Seas and Rivers.* Chemical Engineering Transactions 2021, 86, 433–438. https://doi.org/10.3303/CET2186073.

(20) Ferraioli, R.; Incarnato, L.; **Di Maio, L.**; Scarfato, P. *A Preliminary Study on Recyclability of Mixed Plastic Wastes Recovered from Urban Collection;* 2021; Vol. 885 KEM, pp 109–114. https://doi.org/10.4028/www.scientific.net/KEM.885.109.

(21) Garofalo, E.; **Di Maio, L.**; Scarfato, P.; Apicella, A.; Protopapa, A.; Incarnato, L. *Nanosilicates in Compatibilized Mixed Recycled Polyolefins: Rheological Behavior and Film Production in a Circular Approach.* Nanomaterials 2021, 11 (8). https://doi.org/10.3390/nano11082128.

(22) Garofalo, E.; **Di Maio, L.**; Scarfato, P.; Pietrosanto, A.; Protopapa, A.; Incarnato, L. *Study on Improving the Processability and Properties of Mixed Polyolefin Post-Consumer Plastics for Piping Applications.* Polymers 2021, 13 (1), 1–18. https://doi.org/10.3390/polym13010071.

(23) Garofalo, E.; Scarfato, P.; **Di Maio, L.**; Protopapa, A.; Incarnato, L. *Zeolites as Effective Desiccants to Solve Hygroscopicity Issue of Post-Consumer Mixed Recycled Polyolefins.* Journal of Cleaner Production 2021, 295. https://doi.org/10.1016/j.jclepro.2021.126379.

(24) Garofalo, E.; Scarfato, P.; **Maio, L. D.**; Protopapa, A.; Incarnato, L. *Natural Nanozeolite as Desiccant and Reinforcement Additive in Recycled Polymer Blends from Post-Consumer Flexible Packaging.* Chemical Engineering Transactions 2021, 84, 229–234. https://doi.org/10.3303/CET2184039.

(25) Pietrosanto, A.; Scarfato, P.; **Di Maio, L.**; Incarnato, L. *Development of PLA / PHB Blown Films with Improved Performance for Food Packaging Applications.* Chemical Engineering Transactions 2021, 87, 91–96. https://doi.org/10.3303/CET2187016.

(26) Pietrosanto, A.; Scarfato, P.; **Di Maio, L.**; Incarnato, L. *Effect of Different Types of Pla on the Properties of Pla/Pbat Blown Films;* 2021; Vol. 885 KEM, pp 115–120. https://doi.org/10.4028/www.scientific.net/KEM.885.115.

(27) Coppola, B.; **Di Maio, L.**; Incarnato, L.; Tulliani, J.-M. *Preparation and Characterization of Polypropylene/Carbon Nanotubes (PP/CNTs) Nanocomposites as Potential Strain Gauges for Structural Health Monitoring.* Nanomaterials 2020, 10 (4). https://doi.org/10.3390/nano10040814.

(28) Liao, Y.; Liu, C.; Coppola, B.; Barra, G.; **Di Maio, L.**; Incarnato, L.; Lafdi, K. *Erratum: Effect of Porosity and Crystallinity on 3D Printed PLA Properties.* [Polymers 2019; 11: 1487] DOI 10.3390/Polym11091487. Polymers 2020, 12 (1). https://doi.org/10.3390/polym12010142.

(29) Pietrosanto, A.; Scarfato, P.; **Di Maio, L.**; Incarnato, L. *Development of Eco-Sustainable PBAT-Based Blown Films and Performance Analysis for Food Packaging Applications.* Materials 2020, 13 (23), 1–15. https://doi.org/10.3390/ma13235395.

(30) Pietrosanto, A whitespace ; Scarfato, P.; **Di Maio, L.**; Nobile, M. R.; Incarnato, L. *Evaluation of the Suitability of Poly(Lactide)/Poly(Butylene-Adipate-Co-Terephthalate) Blown Films for Chilled and Frozen Food Packaging Applications.* Polymers 2020, 12 (4). https://doi.org/10.3390/POLYM12040804.

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Date: 22/06/2026

Signature

