

Lo Re Giada Curriculum Vitae

1. PERSONAL INFORMATION	
1.1	Name: Giada Lo Re
1.2	Workplace address, telephone number and e-mail address: Department of Industrial and Materials Science Division of Engineering Materials Chalmers University of Technology SE-412 96 Gothenburg, Sweden
1.3	<p>2018-present Associate Professor/Senior Lecturer in Polymeric Materials and Composites at Department of Industrial and Materials Science, Chalmers University of Technology Web page</p> <p>2016-2018, Postdoctoral researcher at KTH Royal Institute of Technology School of Chemical Science and Engineering Fibre and Polymer Technology/WWSC from January 2016. Web page</p> <hr/> <p>2014, Invited researcher at Chemical and Biological Engineering department the Center for Biotechnology and Interdisciplinary Studies of Rensselaer Polytechnic Institute (RPI), Troy, NY, USA (2014), under the supervision of Prof. Richard A. Gross. Web page</p> <p>2012-2016, Senior researcher at Laboratory of Polymeric and Composite Materials (LPCM), Center of Innovation and Research in Materials & Polymers Laboratory of Polymeric & Composite Materials CIRMAP, UMONS University of Mons, Belgium Web page</p> <p>2008-2009, Research Grant at Department of Chemical Engineering of Processes and Materials (First ranking), University of Palermo, Italy. Project title: "Rheologic study of polyolefinic blends, in particular of LDPE, LLDPE e MDPE, obtained by traditional or metallocene-based catalysis, on processability and melt extrusion properties-structure relationship in order to evaluate film quality and performances ". Project supervisors: Professor Francesco Paolo La Mantia and Professor Roberto Scaffaro, University of Palermo.</p> <p>2004-2008, National and Regional area main seller at GRUPPO 3 S.A.S. (of Emanuele Abbagnato,)</p>

	<p>distributing brands as Diesel, Guess by Marciano and Collection, Pirelli, Belstaff and many others.</p> <p>2004, Collaborator for the botanical garden of Palermo for historical plants census project (historical gardens of Palermo and the Botanic Garden) https://en.wikipedia.org/wiki/Orto_botanico_di_Palermo</p> <p>2003, General and personnel manager for the "Teatro del Sole Festival", S. Maria dello Spasimo (cultural public space used for concerts, theatre shows, exhibitions), Comune di Palermo, Italy. https://en.wikipedia.org/wiki/Santa_Maria_dello_Spasimo</p>
2.	EDUCATIONAL DEGREES
2.1	Undergraduate and Graduate Degrees
	<p>2008, Master of Science degree in in Chemical Engineering and Material Science at the University of Palermo, Italy, with maximum marks and honours: 110/110 cum laude. Main subjects studied: mechanics of materials, transport phenomena, thermodynamics of chemical engineering, dynamics and control of chemical processes, chemical plants & economy applied to engineering, material structure, material mechanics, macromolecular chemistry, polymer physics, polymer technology. Master thesis title: " biodegradable polymer-based composites with natural fillers: preparation and characterization", keywords: biodegradable; eco-composites; Mater-Bi®; melt processing: mixing, extrusion, injection moulding; mechanical properties; rheology; environmental degradation; scanning electron microscopy; wood flours; kenaf fibres.</p> <p>2010, Course "Polymeric (nano)composite materials" delivered at University of Mons, Belgium, (3 credits, 15+15h, code: FS/2MASMAST.CHIM/6958) with the rating of 17/20.</p> <p>2010, National PhD Summer School AIMAT-SIB Bio-Nano-Meta-Materials: 'Available Technology Platforms'', Hotel Continental Terme, Ischia Porto (Napoli, Italy)</p> <p>2009, National PhD Summer School GRICU, Muravera (Cagliari, Italy)</p> <p>2009, International EPF 4th PhD Summer School "Bioplastic and related materials", Gargnano, lake Garda- Italy.</p> <p>2008, Training in Active Sewage Sludge Plant (Impianto di Depurazione Di Acqua Dei Corsari) AMAP S.p.A., Palermo, Italy.</p>
2.2	PhD Degree
	<p>2012, European Doctor of Philosophy (Doctor Europeus) laureate in Chemical Engineering and Material Science at Department of Chemical Engineering of Processes and Materials, University of Palermo, Italy. PhD thesis title: "preparation of thermoplastic materials for biomedical applications" focused on Advanced Materials for Biomedical & Biotechnology applications and Biomaterials for Tissue Engineering and Biomedical applications. Attached Certificate:</p>
3.	LIST OF PUBLICATIONS
3.1	List of Peer-Reviewed Publications in International Journals
	<p>1. Interphase Design of Cellulose Nanocrystals/Poly(hydroxybutyrate-ran-valerate) Bionanocomposites for Mechanical and Thermal Properties Tuning Biomacromolecules 2020-03-04 journal-article</p>

DOI: 10.1021/acs.biomac.9b01760

2. R Ghafari, R Scaffaro, A Maio, EF Gulino, G Lo Re, M Jonoobi
Processing-structure-property relationships of electrospun PLA-PEO
membranes reinforced with enzymatic cellulose nanofibers
Polymer Testing 81, 106182, 1, 2020
DOI: 10.1016/j.polymertesting.2019.106182
3. J Cailloux, JM Raquez, G Lo Re, O Santana, L Bonnaud, P Dubois, et
al.
Melt-processing of cellulose nanofibril/poly lactide
bionanocomposites via a sustainable polyethylene glycol-based
carrier system
Carbohydrate polymers 224, 115188, 2019
4. MLM Rulduà, JM Raquez, GL Re, O Santana, P Dubois, J Cailloux
Procesado en fundido de PLA reforzado con nanofibras de celulosa
a partir de un masterbatch preparado de forma sostenible
Materiales Compuestos 3 (3), 107-111, 2019
5. Kaldéus, T., Träger, A., Berglund, L., Malmström, E., Lo Re, G.
Molecular engineering of the cellulose-PCL bio-nanocomposite
interface by reactive amphiphilic copolymer nanoparticles. (2019)
ACS Nano, 13(6), pp. 6409-6420.
DOI: 10.1021/acsnano.8b08257.
6. Soeta, H., Lo Re, G., Masuda, A., Fujisawa, S., Saito, T.,
Berglund, L.A., Isogai, A.
Tailoring Nanocellulose-Cellulose Triacetate Interfaces by Varying
the Surface Grafting Density of Poly(ethylene glycol). (2018) ACS
Omega, 3 (9), pp. 11883-11889.
DOI: 10.1021/acsomega.8b01616
7. Lo Re, G., Spinella, S., Vilaseca, F., Larsson, P.T., Adàs, F.,
Berglund, L.A.
Poly (ϵ -caprolactone) Biocomposites Based on Acetylated Cellulose
Fibers and Wet Compounding for Improved Mechanical Performance.
(2018) ACS Sustainable Chemistry and Engineering, 6 (5), pp. 6753-
6760.
DOI: 10.1021/acssuschemeng.8b00551
8. Gioia, C., Lo Re, G., Lawoko, M., Berglund, L.
Tunable Thermosetting Epoxies Based on Fractionated and Well-
Characterized Lignins. (2018) Journal of the American Chemical
Society, 140 (11), pp. 4054-4061.
DOI: 10.1021/jacs.7b13620
9. Scaffaro, R., Maio, A., Lo Re, G., Parisi, A., Busacca, A.
Advanced piezoresistive sensor achieved by amphiphilic
nanointerfaces of graphene oxide and biodegradable polymer blends.
(2018) Composites Science and Technology, 156, pp. 166-176.
DOI: 10.1016/j.compscitech.2018.01.008
10. Scaffaro, R., Maio, A., Lo Re, G., Parisi, A., Busacca, A.
Advanced piezoresistive sensor achieved by amphiphilic nanointerfaces
of graphene oxide and biodegradable polymer blends
(2018) Composites Science and Technology, 156, 166-176.
DOI: 10.1016/j.compscitech.2018.01.008

11. Sessini, V., Raquez, J.-M., Lo Re, G., Mincheva, R., Kenny, J.M., Dubois, P., Peponi, L.
Multiresponsive Shape Memory Blends and Nanocomposites Based on Starch
(2016) *ACS Applied Materials and Interfaces*, 8 (30), pp. 19197-19201.
Cited 2 times.
DOI: 10.1021/acsami.6b06618
12. Zaldua, N., Mugica, A., Zubitur, M., Iturrospe, A., Arbe, A., Lo Re, G., Raquez, J.-M., Dubois, P., Müller, A.J.
The role of PLLA-g-montmorillonite nanohybrids in the acceleration of the crystallization rate of a commercial PLA
(2016) *CrystEngComm*, 18 (48), pp. 9334-9344.
DOI: 10.1039/c6ce02005d
13. Lo Re, G., Lopresti, F., Petrucci, G., Scaffaro, R.
A facile method to determine pore size distribution in porous scaffold by using image processing
(2015) *Micron*, 76, pp. 37-45.
DOI: 10.1016/j.micron.2015.05.001
14. Spinella, S., Ganesh, M., Lo Re, G., Zhang, S., Raquez, J.-M., Dubois, P., Gross, R.A.
Enzymatic reactive extrusion: moving towards continuous enzyme-catalysed polyester polymerisation and processing
(2015) *Green Chemistry*, 17 (8), pp. 4146-4150.
DOI: 10.1039/c5gc00992h
15. Spinella, S., Lo Re, G., Liu, B., Dorgan, J., Habibi, Y., Leclère, P., Raquez, J.-M., Dubois, P., Gross, R.A.
Polylactide/cellulose nanocrystal nanocomposites: Efficient routes for nanofiber modification and effects of nanofiber chemistry on PLA reinforcement
(2015) *Polymer (United Kingdom)*, 65, pp. 9-17.
DOI: 10.1016/j.polymer.2015.02.048
16. Todd, R., Tempelaar, S., Lo Re, G., Spinella, S., McCallum, S.A., Gross, R.A., Raquez, J.-M., Dubois, P.
Poly(ω -pentadecalactone)-b-poly(l-lactide) block copolymers via organic-catalyzed ring opening polymerization and potential applications
(2015) *ACS Macro Letters*, 4 (4), pp. 408-411.
DOI: 10.1021/acsmacrolett.5b00021
17. Maiorana, A., Ren, L., Lo Re, G., Spinella, S., Ryu, C. Y., Dubois, P., Gross, R. A.
Biobased epoxy resin toughening with cashew nut shell liquid-derived resin
(2015) *Green Materials*, 3(July-September), 1-38.
18. Maggini, L., Ahrens-Jensen, J., Lo Re, G., Raquez, J.-M., Dubois, P., Bonifazi, D.
Phenanthroline-functionalized MWCNTs as versatile platform for lanthanides complexation
(2014) *Carbon*, 70, pp. 22-29.
DOI: 10.1016/j.carbon.2013.12.040
19. Lo Re, G., Benali, S., Habibi, Y., Raquez, J.-M., Dubois, P.
Stereocomplexed PLA nanocomposites: From in situ polymerization to materials properties
(2014) *European Polymer Journal*, 54 (1), pp. 138-150.
DOI: 10.1016/j.eurpolymj.2014.03.004

20. Lo Re, G., Morreale, M., Scaffaro, R., La Mantia, F.P.
Biodegradation paths of Mater-Bi®/kenaf biodegradable composites
(2013) *Journal of Applied Polymer Science*, 129 (6), pp. 3198-3208.
DOI: 10.1002/app.39027
21. Lo Re, G., Morreale, M., Scaffaro, R., La Mantia, F.P.
Kenaf-filled biodegradable composites: Rheological and mechanical
behaviour
(2012) *Polymer International*, 61 (10), pp. 1542-1548.
DOI: 10.1002/pi.4243
22. Scaffaro, R., Lo Re, G., Rigogliuso, S., Gherzi, G.
3D polylactide-based scaffolds for studying human hepatocarcinoma
processes in vitro
(2012) *Science and Technology of Advanced Materials*, 13 (4), art. no.
045003.
DOI: 10.1088/1468-6996/13/4/045003
23. Scaffaro, R., Lo Re, G., Dispenza, C., Sabatino, M.A., Armelao,
L.
A new route for the preparation of flexible skin-core poly(ethylene-
co- acrylic acid)/polyaniline functional hybrids
(2011) *Reactive and Functional Polymers*, 71 (12), pp. 1177-1186.
DOI: 10.1016/j.reactfunctpolym.2011.08.001
24. Scaffaro, R., Botta, L., Lo Re, G., Bertani, R., Milani, R.,
Sassi, A.
Surface modification of poly(ethylene-co-acrylic acid) with amino-
functionalized silica nanoparticles
(2011) *Journal of Materials Chemistry*, 21 (11), pp. 3849-3857.
DOI: 10.1039/c0jm03310c
25. Scaffaro, R., Morreale, M., Lo Re, G., La Mantia, F.P.
Effect of the processing techniques on the properties of ecocomposites
based on vegetable oil-derived Mater-Bi® and wood flour
(2009) *Journal of Applied Polymer Science*, 114 (5), pp. 2855-2863.
26. Scaffaro, R., Morreale, M., Lo Re, G., La Mantia, F.P.
Degradation of Mater-Bi®/wood flour biocomposites in active sewage
sludge
(2009) *Polymer Degradation and Stability*, 94 (8), pp. 1220-1229.
DOI: 10.1016/j.polymdegradstab.2009.04.028
27. La Mantia, F.P., Scaffaro, R., Morreale, M., Lo Re, G.
Effect of the processing on the properties of biopolymer based
composites filled with wood flour
(2008) *International Journal of Material Forming*, 1 (SUPPL. 1), pp.
759-762.
DOI: 10.1007/s12289-008-0286-7
28. Spinella, S., Lo Re, G., Liu, B., Dorgan, J., Habibi, Y., Raquez,
J.-M., Dubois, P., Gross, R.A.
Modification of cellulose nanocrystals with lactic acid for direct
melt blending with PLA
(2015) *AIP Conference Proceedings*, 1664, art. no. 700191. Full paper.
29. Lo Re, G., Petrucci, G., Scaffaro, R.
Image processing techniques for the analysis of the micro-architecture
of three-dimensional porous scaffolds

	<p>(2011) 24th European Conference on Biomaterials, Annual Conference of the European Society for Biomaterials - Full paper.</p> <p>30. Lo Re, G., Scaffaro, R., Rigogliuso, S., Gherzi, G. Poly(ethyleneglycol) mimics adhesive capability of the ECM treatment on Polylactide-based scaffolds (2011) 24th European Conference on Biomaterials, Annual Conference of the European Society for Biomaterials- Full paper.</p> <p>31. Scaffaro, R; Lo Re, G; Sabatino, MA; Dispenza, C; A new route to obtain PANI-EAA flexible films (2010) MACRO2010: 43rd IUPAC World Polymer Congress-Polymer Science. Full paper</p>
3.2	<p>Book Chapters</p> <p>32. G. Lo Re and V. Sessini. "Biomass Extrusion and Reaction Technologies: New Insights, Future Potential, and Principles to Practices. "Wet feeding approach for cellulosic materials/PCL biocomposites, ACS book Copyright © 2018 American Chemical Society.</p> <p>33. G. Lo Re, J-M. Raquez and P. Dubois, "In Situ Metal-Free Synthesis of Polylactide Enantiomers Grafted from Nanoclays of High Thermostability", in: "Green Polymer Chemistry III: Biobased Materials and Biocatalysis", Chapter 18, pp 287-303. Chapter DOI: 10.1021/bk-2015-1192.ch018 ACS Symposium Series, Vol. 1192. ISBN13: 9780841230651eISBN: 9780841230668. Publication Date (Web): June 18, 2015. Copyright © 2015 American Chemical Society.</p> <p>34. R. Scaffaro, M. Morreale, G. Lo Re, A. Maio And F. P. La Mantia "Green Composites Based on Biodegradable Polymers and Wood Flour", in: "Green Composites: Properties, Design And Life Cycle", Ed. Nova Science Publishers ISBN 978-1-60741-301-1, 2010, Chapter 8, 157-174.</p> <p><u>Patent:</u></p> <p>1. G. Lo Re and P. A. Larsson. Invention defined in the Swedish patent application No. 1750041-4 (Title: MELT-PROCESSED MATERIAL WITH HIGH CELLULOSE FIBER CONTENT) in all countries, 2017.</p>
3.4	<p>National and International Research Awards</p> <p>2016 Green Materials Prize 2016 for the study "Bio-based epoxy resin toughening with cashew nut shell liquid-derived resin" delivered by the Institution of Civil Engineers in London, UK (section 3.4.1, publ. 9)</p> <p>2012 Laureate 2012 Graduate Award as best Thesis in Chemical Engineering and Materials Science at national level (titled: "Preparation of Thermoplastic Materials for Biomedical Application") by AIMAT - Associazione Italiana d'Ingegneria dei Materiali, Italy (Italian order of Materials Engineering).</p> <p>2011 Young Scientist Best Poster Awarded with "the role of aspect ratio in the mechanical properties of lignocellulosic eco-composites obtained from Mater-Bi®". Workshop "Advances in polymer based materials and related technologies" 2011</p>