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## PERSONAL INFORMATION


# Michele Giordano

via Fuoro 79, 80067 Sorrento (Italy)

+393483503363

michele.giordano@cnr.it

Scopus Author ID: 7201827231 ResearcherID: F-5958-2013
http://scholar.google.it/citations?user=JfkGehQAAAAJ&hl=it


Sex Male | Date of birth 13 Jan 1968 | Nationality Italian

## WORK EXPERIENCE

06/2013–Present

### Professor

Telematic University UniNettuno, Roma (Italy)

Coordination of the material science educational sector

Member of the Academic Board of the PhD.

2014–2018

### Invited professor

University of Strasbourg

Academic years 2014-15, 2015-16, 2016-17, 2017-18 (cours de Mécanique des polymères – Propriété mécanique des matériaux – Mécanique des polymères aux élèves de 2e et 3e années)

17/05/2010–Present

### Associate researcher

CERN, Geneve (Switzerland)

Research activity on the application of fiber optic sensing system to high energy physic experiments (CMS).

01/01/2010–Present

### Research Director

CNR National Research Council

Research activities are within the area of engineering and materials science. In particular the main research focuses are nano and macro composite materials, mainly polymer based, including multiscale design and processing of multifunctional composite materials, structural health management systems and thin films engineering for sensing and optoelectronic applications.

Scientific responsible of several research projects.(see list)

09/10/2007–02/01/2010

### Adjunct professor

University of Naples "Federico II", Napoli (Italy)

Teaching the Composite Materials Technology course for the Materials Engineering master degree.

Tutoring of several Master Degree Thesis and Ph.D Thesis(see list).

31/12/2005–31/12/2009

### Senior researcher

National Research Council - Institute for Composite and Biomedical Materials IMCB-CNR, Napoli (Italy)

09/03/2004–12/12/2006

### Adjunct professor

University of Naples "Federico II", Napoli (Italy)

Teaching the Composite Material course for the Materials Engineering master degree.

Tutoring of several Master Degree Thesis and Ph.D Thesis(see list).

02/01/2001–31/12/2005

### Researcher

National Research Council - Institute for Composite and Biomedical Materials IMCB-CNR, Napoli (Italy)

Research activities are within the area of composite materials design and manufacturing. In particular, themes include functional and structural composite materials properties, manufacturing process modelling, development of innovative composite materials manufacturing processes, monitoring systems, smart materials and systems and materials for molecular sensing.

Scientific responsible of several research projects. (see list)

15/06/1998–31/12/2000

### Researcher with a fixed term contract

National Research Council - Institute for Composite Materials Technology ITMC-CNR, Napoli (Italy)

Research activity focused on the development of innovative intelligent manufacturing processes for composite materials.

## EDUCATION AND TRAINING

01/04/1997–14/06/1998

### Research grant

National Research Council- Institute for Composite Materials Technology ITMC-CNR, Napoli (Italy)

Study of the mass transport properties in polymers

01/04/1996–31/03/1997

### Research grant

National Research Council- Institute for Composite Materials Technology ITMC-CNR, Napoli (Italy)

Study of intelligent manufacturing process

19/12/1996

### Ph.Doctor

University of Naples “Federico II”, Napoli (Italy)

**Ph. Doctor in Materials Engineering**

07/04/1992

### Master degree

cum laude

University of Naples “Federico II”, Napoli (Italy)

**Master degree in Chemical Engineering**

## PERSONAL SKILLS

Mother tongue(s) Italian

Foreign language(s)

| UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|
| Listening | Reading | Spoken interaction | Spoken production | |

| | | | | | |
|---|---|---|---|---|---|
| English | C2 | C2 | C2 | C2 | C2 |
| French | A1 | A1 | A1 | A1 | A1 |

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

**Research team organization**

1 January 2006/ 31 December 2017 responsible for the unit "CNR PM.P02.011 / Tecnologie di materiali polimerici, compositi e nano strutture" coordinating the research activity of a team of researchers.

**Industrial Management Committes**

Since 25 July 2016 (ongoing) member of the Management Board of the Tecnologie Optoelettroniche per l'Industria Top In scarl. Top In scarl is a public/private cluster focused on the application of opto electronic technologies in the industrial field.

Since 15 April 2013 (ongoing) member of the Management Committee of the Sistema Campania scarl. Sistema Campania scarl is the regional cluster of companies working in the automotive field.

From 19 January 2005 to 18 January 2009 member of the Scientific Committee of the research spin off company Optosmart srl, active in the field of fiber optic monitoring system. Optosmart has its primary business with Finmeccanica group companies, Italian Ministry of Defense, CERN and SMEs.

From 29 June 2004 to 3 June 2014 member of the Scientific Committe "Centro di eccellenza in Compositi Strutturali per Applicazioni Innovative (SCIC)" by the Italian Ministry of Research and University, aimed to study of the applications of composite materials in construction.

Since 17 March 2004 CNR representative in the Executive Committee of the Campania Region Aerospace Research Network initiative aimed to coordinate the public and private efforts in the aeronautical sector in the Campania region.

**Conference organization and chairs**

Member of the Executive Committee of the 9th International Conference on Composite Science and Technology,24-26 April 2013, Sorrento, Italy

Program Chair of the conference The fifth European Workshop on Structural Health Monitoring, 29 June - 02 July, 2010, Sorrento, Italy.

Member of the International Programme Committee of the 4th International Conference on Sensing Technology, June 3-5, 2010, Lecce, Italy

Member of the Technical Local Organising Committee del Third European Workshop on Optical Fiber Sensors, July 3-6, 2007, Napoli, Italy

Member of the International Programme Committee della 2nd International Conference on Sensing Technology, November 21-23, 2005, Palmerston North, New Zealand

Job-related skills

**Technology transfer**

In 2005 co founder of the research spin off company Optosmart srl (www.optosmart.com) focused on the development of fiber optic sensor systems.

**Patents**

World Patent on the "Reproduction of Sound of Musical Instruments by Using Fiber Optic Sensors" filing date 4 March 2010, PCT/IT2010/000094, n°: WO2010106563.

European patent on an "Sensore opto-elettronico per la rivelazione di onde acustiche trasmesse da un fluido" n.EP1731886A2 priority date 9 June 2005, EP20060115184 20060608

Italian patent on "Sistema per il monitoraggio del peso e delle anomalie di ruote di materiale rotabile in movimento" n.BN20110004A1 priority date 24 May 2011

Italian patent on "Un nuovo rivelatore ottico per la misura senza contatto delle variabili cinematiche" n.BN20110011A1 priority date 22 December 2011

Italian patent on "Sistema di fabbricazione di materiali compositi con infusione pulsata di resina (pulsed infusion)." n.NA20090067A1 priority date 3 November 2009

Italian patent on "Sensore di pressione in fibra ottica" n.BN20090002A1 priority date 16 March 2009

Italian patent on "Sistema per il monitoraggio in tempo reale dello stato di usura/integrita' funzionale di sistemi di movimentazione di scambi ferroviari" n.TO20090176A1 priority date 10 March 2009

Italian patent on "Biosensore, sensore chimico, modulatore e switch ottico basato su reticoli a passo lungo in fibra ottica ricoperti da una sottile stratificazione di materiali ad alto indice di rifrazione e regolati in regime di transizione modale" n.BN20090004A1 priority date 26 October 2009

Italian patent on “Feedthrough per fibre ottiche per recipienti ad alta pressione,” Patent Number: ITBN20080006A1 filing date 12 September 2008

Italian patent on a "Procedimento per l'allineamento di nano particelle metalliche o semiconduttrici disperse in matrici dielettriche" n.TO2008A000316 filing date 23 April 2008,

Italian patent on a "Sensore in fibra ottica basato su strati sottili langmuir blodgett di nanotubi di carbonio a singola parete in particolare per la rivelazione di idrogeno gassoso a temperature criogeniche e relativo dispositivo di rivelazione" n. RM20060192A1 filing date 5 April 2006

Italian patent on an "Un nuovo dispositivo per realizzare filtri accordabili elettricamente per applicazioni alle telecomunicazioni su portante ottica, alla modulazione ed alla sensoristica." n.BN2004 A000001 filing date 5 November 2004

Italian patent on a "Dispositivo di misura ottico elettronico" n.RM2001 A000189 filing date10 April 2001

Italian patent on "Sensori optoelettronici in aria ed in fibra ottica per il controllo del processo di produzione e per la misura delle deformazioni di materia" n.NA20000035D0 filing date 1 June 2000

**R&D programs evaluation**

2018 Expert Evaluator for programme Horizon2020: H2020-FETOPEN-2018-2019-2020-01

2018 Expert Evaluator for programme No.11.1.1.0/15/TP/004 “Support of European Regional Development Fund for implementation and management of Cohesion policy funds in Central Finance and Contracting Agency” of EU Structural and Cohesion Fund 2014-2020 programming for the The Central Finance and Contracting Agency (CFLA) of the Minister of Finance of the Republic of Latvia

2017 Expert Evaluator for programme CONTRATTO DI PROGRAMMA REGIONALE PER LO SVILUPPO INNOVATIVO DELLE FILIERE MANIFATTURIERE STRATEGICHE IN CAMPANIA

2016 Expert Evaluator for programme Horizon2020: 2014-2015 Marie Skłodowska-CurieActions (H2020-MSCA-IF-2016)

2015 Expert Evaluator for programme Horizon2020: 2014-2015 Marie Skłodowska-CurieActions (H2020-MSCA-IF-2015)

2015 Expert Evaluator for the Italian Ministry of Research and University of the Programma Operativo Nazionale “Ricerca e Competitività" 2007-2013. In itinere evaluation of 4 projects in the area of Aeronautics.

2014 Expert Evaluator for the Italian Ministry of Research and University of the Programma Operativo Nazionale “Ricerca e Competitività" 2007-2013. Panel evaluation of Public/private initiative in Aeronautical sector.

2013 Expert Evaluator for the Czech Science Foundation of Postdoctoral Research Programme. Evaluation of academic research projects.

2012 Expert Evaluator for the Italian Ministry of Research and University of the PRIN (Progetti di Rilevante Interesse Nazionale) program. Evaluation of cooperative academic research projects.

2012 Expert Evaluator for the Romanian UEFISCDI (The Executive Agency for Higher Education, Research, Development and Innovation Funding) of the Exploratory Research Programme and Postdoctoral Research Programme. Evaluation of academic research projects.

2012 Expert Evaluator Panel for the Confindustria (Italian Association of Enterprises) of the“DaiDistretti Produttivi ai Distretti Tecnologici – 2 Interventi per il rafforzamento dell'orientamento tecnologico dei distretti produttivi dell'Emilia-Romagna" programme. Evaluation of cooperative public/private research projects.

2012 Expert Evaluator for the Italian Ministry of Research and University of the Programma Operativo Nazionale “Ricerca e Competitività" 2007-2013. In itinere evaluation of the SISTEMA infrastructural investiment project.

2010 Expert Evaluator Panel for COST Office of the cooperative COST Action programme. Evaluation of the COST Trans-Domain Proposals.

2009 Expert Evaluator Panel for the Italian Ministry of Research and University of the PRIN (Progetti di Rilevante Interesse Nazionale) program. Evaluation of cooperative academic research projects.

2007 Expert Evaluator Panel for ASI (Italian Space Agency) of the USV/ASA/UHTC program. Review of the Discipline Test Readiness of the ASA Aproject.

2004 Expert Evaluator for Innost srl of the FP5 Growth programme. Ex post evaluation of project in the frame of the Growth Programme FP5.

2004 Expert Evaluator for the Italian Ministry of Research and University of the PRIN (Progetti di Rilevante Interesse Nazionale) program. Evaluation of cooperative academic research projects.

2003 Expert Evaluator Panel for the Italian Ministry of Research and University of the PRIN (Progetti di Rilevante Interesse Nazionale) program. Evaluation of cooperative academic research projects.

2002 Expert Evaluator Panel for the DG Research of European Commission of the NAS programme. Evaluation of the R&D projects for the GROWTH NAS FP5 programme.

2002 Expert Evaluator Panel for the DG Research of European Commission of the NAS programme. Evaluation of the R&D projects for the Accompanying Measures NAS FP5 programme.

**Ph.D. Thesis Tutoring**

2017 ongoing Ph.D course in Materials and Structures Eng.,XXX Ciclo, Fabrizia Ciliento, Nanolaminates based on Graphene. Università degli Studi di Napoli Federico II

2014 2017 Ph.D course in Materials and Structures Eng.,XXVII Ciclo, Chiara Taddei, Magneto optical metamaterials. Università degli Studi di Napoli Federico II

2009 to 2012,Ph.D course in Materials and Structures Eng.,XXII Ciclo, Angelo Petriccione, Toward a new thermoplastic epoxy formulation. Università degli Studi di Napoli Federico II

2007 to 2010,Ph.D course in Materials and Structures Eng.,XXII Ciclo,Alfonso Martone, Innovative configurations of hybrid structural composite materials for damping applications. Università degli Studi di Napoli Federico II

2007 to 2010, Ph.D course in Materials and Structures Eng.,XXII Ciclo, Gabriella Faiella Production of carbon nanotubes/polymer matrix nanocomposites. Universitàdegli Studi di Napoli Federico II

2006 to 2009, Ph.D course in Materials and Structures Eng., XXI Ciclo, Cristina Formicola, Flame resistance of nanocomposites. Università degli Studi di Napoli Federico II

2005 to 2008, Ph.D course in Materials and Structures Eng. XX Ciclo, Buosciolo, Antonietta, Tin oxide thin films in opto-chemical sensing: preparation, surface morphology, near field optical properties and testing. Università degli Studi di Napoli Federico II

2004 to 2007, Ph.D course in Chemistry, Materials and Manufacturing Eng.XIXCiclo, De Simone, Valeria, Photochemical reactions in nanoporous syndiotactic polystirene. Università degli Studi di Napoli Federico II.

2003 to 2006, Ph.D course in Materials Eng., XVIII Ciclo, Manferlotti, Adriano,Monitoring and optimisation of liquid molding manufacturing processes. Università degli Studi di Napoli “Federico II"

2001 to 2004, Ph.D course in Materials Eng., XVI Ciclo, Jehad Sharawi Nasser, Fiber optic integrated composite materials. Università degli Studi di Napoli “Federico II"

## ADDITIONAL INFORMATION

### Publications

**Scientific publications (Scopus indexed)**

**Journal**

1. Sansone L, Macchia E, Taddei C, Torsi L, Giordano M. Label-free optical biosensing at femtomolar detection limit. *Sensors Actuators, B Chem*. 2018;255:1097-1104. doi:10.1016/j.snb.2017.08.059

2. Ding S, Attia MF, Wallyn J, et al. Microfluidic-Assisted Production of Size-Controlled Superparamagnetic Iron Oxide Nanoparticles-Loaded Poly(methyl methacrylate) Nanohybrids. *Langmuir*. 2018;34(5):1981-1991. doi:10.1021/acs.langmuir.7b01928

3. Esposito F, Sansone L, Taddei C, Campopiano S, Giordano M, Iadicicco A. Ultrasensitive biosensor based on long period grating coated with polycarbonate-graphene oxide multilayer. *Sensors Actuators, B Chem*. 2018;274:517-526. doi:10.1016/j.snb.2018.08.002

4. Ricciardi MR, Martone A, Borriello A, et al. Mechanical behavior of hybrid fiber-reinforced composites manufactured by pulse infusion. *Polym Compos*. 2017;38(10):2254-2260.

doi:10.1002/pc.23806

5. Zuppolini S, Quero G, Consales M, et al. Label-free fiber optic optrode for the detection of class C β-lactamases expressed by drug resistant bacteria. *Biomed Opt Express*. 2017;8(11):5191. doi:10.1364/BOE.8.005191

6. Glaskova-Kuzmina T, Aniskevich A, Martone A, Giordano M, Zarrelli M. Effect of moisture on elastic and viscoelastic properties of epoxy and epoxy-based carbon fibre reinforced plastic filled with multiwall carbon nanotubes. *Compos Part A Appl Sci Manuf*. 2016;90:522-527. doi:10.1016/j.compositesa.2016.08.026

7. Quero G, Consales M, Severino R, et al. Long period fiber grating nano-optrode for cancer biomarker detection. *Biosens Bioelectron*. 2016;80:590-600. doi:10.1016/j.bios.2016.02.021

8. Quero G, Zuppolini S, Consales M, et al. Long period fiber grating working in reflection mode as valuable biosensing platform for the detection of drug resistant bacteria. *Sensors Actuators, B Chem*. 2016;230:510-520. doi:10.1016/j.snb.2016.02.086

9. Zotti A, Borriello A, Zuppolini S, et al. Fabrication and characterization of metal-core carbon-shell nanoparticles filling an aeronautical composite matrix. *Eur Polym J*. 2015;71:140-151. doi:10.1016/j.eurpolymj.2015.07.052

10. Chiuchiolo A, Palmieri L, Consales M, et al. Cryogenic-temperature profiling of high-power superconducting lines using local and distributed optical-fiber sensors. *Opt Lett*. 2015;40(19):4424-4427. doi:10.1364/OL.40.004424

11. Pisco M, Quero G, Iadicicco A, Giordano M, Galeotti F, Cusano A. Lab on fiber by using the breath figure technique. *Springer Ser Surf Sci*. 2015;56:233-250. doi:10.1007/978-3-319-06998-2_11

12. Zotti A, Borriello A, Ricciardi M, Antonucci V, Giordano M, Zarrelli M. Effects of sepiolite clay on degradation and fire behaviour of a bisphenol A-based epoxy. *Compos Part B Eng*. 2015;73:139-148. doi:10.1016/j.compositesb.2014.12.019

13. Glaskova-Kuzmina T, Aniskevich A, Zarrelli M, Martone A, Giordano M. Effect of filler on the creep characteristics of epoxy and epoxy-based CFRPs containing multi-walled carbon nanotubes. *Compos Sci Technol*. 2014;100:198-203. doi:10.1016/j.compscitech.2014.06.011

14. Alongi J, Carletto RA, Bosco F, et al. Caseins and hydrophobins as novel green flame retardants for cotton fabrics. *Polym Degrad Stab*. 2014;99(1):111-117. doi:10.1016/j.polymdegradstab.2013.11.016

15. Rea I, Sansone L, Terracciano M, et al. Photoluminescence of graphene oxide infiltrated into mesoporous silicon. *J Phys Chem C*. 2014;118(47):27301-27307. doi:10.1021/jp506539n

16. Pisco M, Galeotti F, Quero G, Iadicicco A, Giordano M, Cusano A. Miniaturized Sensing Probes Based on Metallic Dielectric Crystals Self-Assembled on Optical Fiber Tips. *ACS Photonics*. 2014;1(10):917-927. doi:10.1021/ph500126v

17. Zotti A, Borriello A, Martone A, Antonucci V, Giordano M, Zarrelli M. Effect of sepiolite filler on mechanical behaviour of a bisphenol A-based epoxy system. *Compos Part B Eng*. 2014;67:400-409. doi:10.1016/j.compositesb.2014.07.017

18. Consales M, Berruti G, Borriello A, et al. Nanoscale TiO_2-coated LPGs as radiation-tolerant humidity sensors for high-energy physics applications. *Opt Lett*. 2014;39(14):4128. doi:10.1364/OL.39.004128

19. Petriccione A, Zarrelli M, Antonucci V, Giordano M. Aggregates of chemically functionalized multiwalled carbon nanotubes as viscosity reducers. *Materials (Basel)*. 2014;7(4):3251-3261. doi:10.3390/ma7043251

20. Sansone L, Malachovska V, La Manna P, et al. Nanochemical fabrication of a graphene oxide-based nanohybrid for label-free optical sensing with fiber optics. *Sensors Actuators, B Chem*. 2014;202:523-526. doi:10.1016/j.snb.2014.05.067

21. Makovec A, Berruti G, Consales M, et al. Radiation hard polyimide-coated FBG optical sensors for relative humidity monitoring in the CMS experiment at CERN. *J Instrum*. 2014;9(3). doi:10.1088/1748-0221/9/03/C03040

22. Ricciardi MR, Antonucci V, Durante M, et al. A new cost-saving vacuum infusion process for fiber-reinforced composites: Pulsed infusion. *J Compos Mater*. 2014;48(11):1365-1373. doi:10.1177/0021998313485998

23. Riccio A, Damiano M, Zarrelli M, Giordano M, Scaramuzzino F. Simulating the response of composite plates to fire. *Appl Compos Mater*. 2014;21(3):511-524. doi:10.1007/s10443-013-9357-0

24. Monti M, Armentano I, Faiella G, et al. Toward the microstructure-properties relationship in MWCNT/epoxy composites: Percolation behavior and dielectric spectroscopy. *Compos Sci Technol*.

2014;96:38-46. doi:10.1016/j.compscitech.2014.03.008

25. Berruti G, Consales M, Borriello A, et al. A comparative study of radiation-tolerant fiber optic sensors for relative humidity monitoring in high-radiation environments at CERN. *IEEE Photonics J*. 2014;6(6). doi:10.1109/JPHOT.2014.2357433

26. Antonucci V, Esposito M, Ricciardi MR, Giordano M, Zarrelli M. Strain monitoring of composite elements by fibre Bragg grating sensors during a quasi-static indentation. *Compos Part B Eng*. 2014;56:34-41. doi:10.1016/j.compositesb.2013.07.020

27. Lavorgna M, Romeo V, Martone A, et al. Silanization and silica enrichment of multiwalled carbon nanotubes: Synergistic effects on the thermal-mechanical properties of epoxy nanocomposites. *Eur Polym J*. 2013;49(2):428-438. doi:10.1016/j.eurpolymj.2012.10.003

28. Bahrampour A, Iadicicco A, De Luca G, et al. Porphyrin thin films on fiber optic probes through UV-light induced deposition. *Opt Laser Technol*. 2013;49:279-283. doi:10.1016/j.optlastec.2013.01.019

29. Di Fabio G, Romanucci V, Zarrelli M, Giordano M, Zarrelli A. C-4 gem-dimethylated oleanes of gymnema sylvestre and their pharmacological activities. *Molecules*. 2013;18(12):14892-14919. doi:10.3390/molecules181214892

30. Guida L, Oliva A, Basile MA, Giordano M, Nastri L, Annunziata M. Human gingival fibroblast functions are stimulated by oxidized nano-structured titanium surfaces. *J Dent*. 2013;41(10):900-907. doi:10.1016/j.jdent.2013.07.009

31. Esposito M, Buontempo S, Petriccione A, et al. Fiber Bragg Grating sensors to measure the coefficient of thermal expansion of polymers at cryogenic temperatures. *Sensors Actuators, A Phys*. 2013;189:195-203. doi:10.1016/j.sna.2012.09.016

32. Pilla P, Trono C, Baldini F, Chiavaioli F, Giordano M, Cusano A. Giant sensitivity of long period gratings in transition mode near the dispersion turning point: an integrated design approach. *Opt Lett*. 2012;37(19):4152. doi:10.1364/OL.37.004152

33. Ricciardi MR, Antonucci V, Giordano M, Zarrelli M. Thermal decomposition and fire behavior of glass fiber-reinforced polyester resin composites containing phosphate-based fire-retardant additives. *J Fire Sci*. 2012;30(4):318-330. doi:10.1177/0734904112439293

34. Szillási Z, Buontempo S, Béni N, et al. One Year of FOS Measurements in CMS Experiment at CERN. *Phys Procedia*. 2012;37:79-84. doi:10.1016/j.phpro.2012.02.360

35. Martone A, Formicola C, Piscitelli F, et al. Thermo-mechanical characterization of epoxy nanocomposites with different carbon nanotube distributions obtained by solvent aided and direct mixing. *Express Polym Lett*. 2012;6(7):520-531. doi:10.3144/expresspolymlett.2012.56

36. Pilla P, Sandomenico A, Malachovská V, et al. A protein-based biointerfacing route toward label-free immunoassays with long period gratings in transition mode. *Biosens Bioelectron*. 2012;31(1):486-491. doi:10.1016/j.bios.2011.11.022

37. Faiella G, Antonucci V, Buschhorn ST, Prado L, Schulte K, Giordano M. Tailoring the electrical properties of MWCNT/epoxy composites controlling processing conditions. *Compos Part A Appl Sci Manuf*. 2012;43(9):1441-1447. doi:10.1016/j.compositesa.2012.04.002

38. Glaskova T, Zarrelli M, Aniskevich A, Giordano M, Trinkler L, Berzina B. Quantitative optical analysis of filler dispersion degree in MWCNT-epoxy nanocomposite. *Compos Sci Technol*. 2012;72(4):477-481. doi:10.1016/j.compscitech.2011.11.029

39. Ricciardi MR, Antonucci V, Zarrelli M, Giordano M. Fire behavior and smoke emission of phosphate-based inorganic fire-retarded polyester resin. *Fire Mater*. 2012;36(3):203-215. doi:10.1002/fam.1101

40. Saccomanno A, Laudati A, Szillasi Z, et al. Long-term temperature monitoring in CMS using fiber optic sensors. *IEEE Sens J*. 2012;12(12):3392-3398. doi:10.1109/JSEN.2012.2205989

41. Petriccione A, Annicchiarico D, Antonucci V, et al. A stiffness volume averaging based approach to model non-crimp fabric reinforced composites. *Compos Sci Technol*. 2012;72(2):360-369. doi:10.1016/j.compscitech.2011.11.026

42. Annunziata M, Oliva A, Buosciolo A, Giordano M, Guida A, Guida L. Bone marrow mesenchymal stem cell response to nano-structured oxidized and turned titanium surfaces. *Clin Oral Implants Res*. 2012;23(6):733-740. doi:10.1111/j.1600-0501.2011.02194.x

43. Faiella G, Antonucci V, Daghia F, Fascia S, Giordano M. Fabrication and thermo-mechanical characterization of a shape memory alloy hybrid composite. *J Intell Mater Syst Struct*. 2011;22(3):245-252. doi:10.1177/1045389X10396954

44. Formicola C, De Fenzo A, Zarrelli M, Giordano M, Antonucci V. Zinc-based compounds as smoke suppressant agents for an aerospace epoxy matrix. *Polym Int*. 2011;60(2):304-311.

doi:10.1002/pi.2949

45. Petrone P, Giordano M, Giustino S, Guarino FM. Endemic Fluorosis At Vesuvius-Enduring Fluoride Health Hazard for the Vesuvius Area Population: the Case of Ad 79 Herculaneum. *PLoS One*. 2011;44(3):177.

46. Martone A, Faiella G, Antonucci V, Giordano M, Zarrelli M. The effect of the aspect ratio of carbon nanotubes on their effective reinforcement modulus in an epoxy matrix. *Compos Sci Technol*. 2011;71(8):1117-1123. doi:10.1016/j.compscitech.2011.04.002

47. Glaskova T, Zarrelli M, Borisova A, Timchenko K, Aniskevich A, Giordano M. Method of quantitative analysis of filler dispersion in composite systems with spherical inclusions. *Compos Sci Technol*. 2011;71(13):1543-1549. doi:10.1016/j.compscitech.2011.06.009

48. Annunziata M, Oliva A, Basile MA, et al. The effects of titanium nitride-coating on the topographic and biological features of TPS implant surfaces. *J Dent*. 2011;39(11):720-728. doi:10.1016/j.jdent.2011.08.003

49. Martone A, Giordano M, Antonucci V, Zarrelli M. Enhancing damping features of advanced polymer composites by micromechanical hybridization. *Compos Part A Appl Sci Manuf*. 2011;42(11):1663-1672. doi:10.1016/j.compositesa.2011.07.019

50. Antonucci V, Esposito M, Ricciardi MR, Raffone M, Zarrelli M, Giordano M. Permeability characterization of stitched carbon fiber preforms by fiber optic sensors. *Express Polym Lett*. 2011;5(12):1075-1084. doi:10.3144/expresspolymlett.2011.105

51. Schulz SC, Faiella G, Buschhorn ST, et al. Combined electrical and rheological properties of shear induced multiwall carbon nanotube agglomerates in epoxy suspensions. *Eur Polym J*. 2011;47(11):2069-2077. doi:10.1016/j.eurpolymj.2011.07.022

52. Pilla PP, Malachovská V, Borriello A, et al. Transition mode long period grating biosensor with functional multilayer coatings. *Opt Express*. 2011;19(2):512. doi:10.1364/OE.19.000512

53. Manzillo PF, Pilla P, Buosciolo A, et al. Self assembling and coordination of water nano-layers on polymer coated long period gratings: Toward new perspectives for cation detection. *Soft Mater*. 2011;9(2-3):238-263. doi:10.1080/1539445X.2011.552387

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**Conference talks**

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Projects

**International research groups participation**

From Sept 2018 ongoing Principal Investigator to the research collaboration project CRYOPAL in the framework of the TrasNational Access programme N.730871 ARIES of the European Organization for Nuclear Research CERN

From February 2014 to September 2017 Principal investigator of the research collaboration agreement N.104683 between the Institute for Composite and Biomedical Materials -CNR- and the Instite Charles Sadron -CNRS- on the "Development of Composite polymer microparticles and their application to optical sensors"

From November 2013 to march 2014 participant to the research collaboration project FOSxCRYO in the framework of the TrasNational Access programme N.312453 EUCARD of the European Organization for Nuclear Research CERN

**Scientific Manager for the cooperative projects:**

2018 FIRE project aimed to develop graphene based fire protection system founded (1.4 MEuro) by the Campania Region

2017 OPTIMA project aimed to develop biosensor based on fiber optic tecnology founded (580kEuro, CNR partecipation) by the Italian Ministry of Research and University

2014 HyCompo2020 project aimed to develop highly integrated technologies for a more sustainable mobility founded (5.8MEuro) by the Italian Ministry of Research and University

2010 Epoplastic project aimed to develop a new class of epoxy based thermoplastic composite materials founded (5.3MEuro) by the Italian “Ministero dello Sviluppo Economico”

2001 L.41 project focused on the development of a monitoring system for the manufacturing process of food packaging polymeric films founded (32kEuro) by the Campania Region

2000 L.41 project focused on the development of a monitoring system for the RFI process for composite materials manufacturingfounded (24kEuro) by the Campania Region

**Scientific Manager for the Inst. of Polymers Composites and Biomaterials CNR partecipation within the cooperative projects:**

2018 TIPA project focused on the development of new products for aeronautical sector in thermoplastic composite founded (400kEuro) by the Italian Ministry of Economic Development

2013 SMART HEALTH 2.0 project focused on the development of fiber optic biosensors founded (310KEuro) by Italian Ministry of University and Research

2013 RITMARE Italian Flagship (IMCB unit) focused an the development of a new class of magneto-optic material founded (120kEuro) by Italian Ministry of University and Research

2012 OPTOBACTERIA project focused on the development of antibiotic resistance biosensors founded (220kEuro) by the EU in the frame of FP7 Capacity programme “Research for the benefits of the SMEs”

2012 SCYPRI project focused on the design and manufacturing of composite structures founded (510kEuro) by the EU in the frame of FP7 Capacity programme “Research for the benefits of the SMEs”

2011 RhFOS-CERN project on “Optical radiation resistant thermo hygrometer” founded (20kEuro of 58kEuro) by CERN in the frame of a trilateral agrrement between CERN/IMCB-CNR/University of Sannio

2007 ARCA programme on multifunctional composite materials founded (1.1MEuro) by the talian Ministry of University and Research

2006 TRASPORTI project focused on the development of concurrent solution in composite structures design and fabricationfounded (1.9MEuro) by thetalian Ministry of University and Research

2002 SMART project focused on the development of intelligent structures founded (495kEuro) by the Italian Ministry of Research and University

2001 CLUSTER project focused on the development of composite materials intelligent processing founded (722kEuro) by the Italian Ministry of Research and University

2001 Piano Finalizzato MSTA II 2000 project focused on the study of the injection molding technology founded (47kEuro) by theItalian Ministry of Research and University

**Scientific Manager for commissioned research activities:**

2007 AHMOS II project focused on the development of Structural Health Monitoring system in military field founded (95kEuro) by the Italian Aerospace Research Center CIRA

2006 FML project focused on the thermal fatigue on Fiber Metal Laminates founded (105kEuro) by Alenia Aeronautica

2005 RFI project focused on the development of innovative composite materials fabrication processes founded (105kEuro) by Alenia Aeronautica

2002 HIWING project focused on a preliminary study of Hingeless Wing configuration founded (15kEuro) by the Italian Aerospace Research Center CIRA

2001 AHMOS project focused on the study of the opto mechanical behavior od Bragg grating sensors founded (5kEuro) by Alenia Aeronautica

## Books

**Editor**

Optochemical Nanosensors (Series in Sensors) Editors A. Cusano, F.J.Arregui, M.Giordano, A.Cutolo, Taylor & Francis, 2012, ISBN-101439854890

**Chapters**

"Mechanical Properties of Nanolaminates Based on Graphene Nanoplatelets." A. Martone, M.R.Ricciardi, M.Giordano, in Experimental Characterization, Predictive Mechanical and Thermal Modeling of Nanostructures and their Polymer Composites 233-251 Elsevier, 2018, ISBN 978-0-323-48061-1

"Processing: Autoclave" A.Langella, V.Antonucci, M.Giordano in Encyclopedia of Composites 2347-2358 Wiley, 2012, ISBN 978-0-470-12828-2

"Multifunctional Fiber-Optic Nanosensors for Environmental Monitoring" Alessio Crescitelli, Marco Consales, Antonello Cutolo, Michele Giordano, and Andrea Cusano in Optochemical Nanosensors (Series in Sensors) Taylor & Francis, 2012, ISBN-101439854890

"Investigation of the Effective Reinforcement Modulus of Carbon Nanotubes in an Epoxy Matrix" A.Martone, G.Faiella, V.Antonucci, M.Giordano M.Zarrelli in Carbon Nanotubes - From Research to Applications 16, 269-294 Intech, 2011, ISBN 978-953-307-500-6,

“Fiber Bragg gratingsevanescent wave sensors: a view back and recent advancements”, A.Cusano, A.Cutolo, M.Giordano in Sensors, 7, 113-153, Springer Verlag, 2009 ISBN 978-3-540-69030-6

“Fiber Bragg Grating sensors: industrial applications”, C.Ambrosino, A.Iadicicco, S.Campopiano,A.Cutolo, M.Giordano, A.Cusano in An Introduction to Optoelectronic sensors, 2, 34-77, WorldScientific, 2009. ISBN-10 981-283-412-5

“Fiber optic sensors in Structural Health Monitoring”, M.Giordano, J.Sharawi Nasser, M.Zarrelli,A.Cusano, A.Cutolo in An Introduction to Optoelectronic sensors, 17, 378-403, World Scientific, 2009. ISBN-10981-283-412-5

"Fiber Bragg Grating Sensors and Piezoelectric Actuators in Co-Located Configuration for Active Vibration Control Applications" C. Ambrosino, G. Diodati, A. Laudati, G. Breglio, M. Giordano, A. Cutolo, A. Cusano in Smart Sensors and Sensing Technology, Springer, 2008 ISBN-978-3-540-79589-6

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"Fiber Bragg Gratings Evanescent Wave Sensors: A View Back and Recent Advancements" Cusano A., Cutolo A., Giordano M. in Sensors. Lecture Notes Electrical Engineering, vol 21. Springer, ISBN -978-3-540-69030-6

“Liquid Moulding Processes”V.Antonucci, M.Giordano, L.Nicolais in Handbook of Polymer Blends andComposites, 2, 53-83, Rapra Tech. Ldt., 2002. ISBN 1-85957-278-2

“Pultrusion and othershaping processes” A.Borzacchiello, M.Giordano, L.Nicolais in Handbook ofComposites Fabrication/Manufacturing 6, 127-162, Rapra Tech. Ldt., 2001. ISBN1-85957-263-4

"Advanced ThermoplasticsComposites" G.Carotenuto, M.Giordano, L.Nicolais in Handbook ofThermoplastics 42, 1017-1034, Marcel Dekker, Inc. 1997. ISBN 978-0824-79797-3

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| Invited lectures | "Functional colloids for responsive photonic crystals" 9th International Conference on "Times of Polymers (TOP) & Composites", 17-21 June 2018, Ischia<br>Keynote Lecture "Composites for Transportation" 15th European Conference on Composite Materials, 24-28 June 2012, Venezia |
| Editorial Advisory Board | Member from 2018 of "REVIEWS ON ADVANCED MATERIALS SCIENCE" journal, de Gruyter, ISSN 1605-8127 |