

CURRICULUM VITAE

FORMATO EUROPEO/EUROPEAN FORMAT

INFORMAZIONI PERSONALI/ PERSONAL INFORMATION

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|---|--|
| Nome, Cognome/Name, Surname | Giorgetti Emilia |
| Indirizzo/Address | Via Pier Capponi 21, 50132 FIRENZE Italy |
| Telefono/Telephone | +39055573444 (home) +5255.55963655 ext. 440 (office) |
| Fax | |
| E-mail | messico.scienza@esteri.it |
| Sito web/Website | |
| Nazionalità/Nationality | Italiana/Italian |
| Luogo e data di nascita/ Place and Date of birth | Firenze (Italy) 29 Settembre 1959 |

ESPERIENZA PROFESSIONALE /WORK EXPERIENCE

| | |
|---|---|
| In ordine di data /Dates (from – to)] | Since March 2015 |
| Nome e indirizzo del datore di lavoro / Name and address of employer | Ministero degli Affari Esteri e della Cooperazione Internazionale, Ambasciata d'Italia in Messico Paseo de las Palmas 1994 Col. Lomas de Chapultepec 11000 México, D.F. 55.55963655 ext. 440 |
| Tipo o settore di attività / Type of business or sector | Scientific Attache' |
| Funzione o posto occupato / Occupation or position held | Counselor |
| Principali mansion e responsabilità / Main activities and responsibilities | Scientific and Technological Bilateral Cooperation |
| In ordine di data /Dates (from – to)] | January 2006 – February 2015 |
| Nome e indirizzo del datore di lavoro / Name and address of employer | CNR-ISC Via Madonna del Piano 10, Sesto Fiorentino (Firenze), Italy |
| Tipo o settore di attività / Type of business or sector | Research and Research Management |
| Funzione o posto occupato / Occupation or position held | Senior Scientist |
| Principali mansion e responsabilità / Main activities and responsibilities | Research and Research Management |

2004 - 2006

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|---|---|
| Nome e indirizzo del datore di lavoro / Name and address of employer | CNR-ISC Via Madonna del Piano 10, Sesto Fiorentino (Firenze), Italy |
| Tipo o settore di attività / Type of business or sector | Research and Research Management |
| Funzione o posto occupato / Occupation or position held | Scientist |
| Principali mansioni e responsabilità / Main activities and responsibilities | Research and Research Management |

1988 - 2004

| | |
|---|---|
| Nome e indirizzo del datore di lavoro / Name and address of employer | CNR-IFAC Via Panciatichi 64, Firenze, Italy |
| Tipo o settore di attività / Type of business or sector | Research |
| Funzione o posto occupato / Occupation or position held | Scientist |
| Principali mansioni e responsabilità / Main activities and responsibilities | Research |

.] **1986 -1988**

| | |
|---|---|
| Nome e indirizzo del datore di lavoro / Name and address of employer | CNR-IFAC Via Panciatichi 64, Firenze, Italy |
| Tipo o settore di attività / Type of business or sector | Research |
| Funzione o posto occupato / Occupation or position held | Post Doc Student |
| Principali mansioni e responsabilità / Main activities and responsibilities | Research |

**ISTRUZIONE E FORMAZIONE /
EDUCATION AND TRAINING**

In ordine di data /Dates (from – to) March 25, 1985

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|--|--|
| Nome e tipo d'istituto di istruzione o formazione / Name and type of organisation providing education and training | University of Firenze (Italy) |
| Principali materie e competenze professionali apprese / Principal subjects occupational skills covered | Optics, Materials Science, Spectroscopy |
| Certificato o diploma ottenuto /Title of qualification awarded | Laurea Degree in Physics from University of Firenze (Italy) |
| Livello nella classificazione nazionale / Level in National classification | 110/110 magna cum Laude |

ATTIVITA' DI RICERCA / RESEARCH ACTIVITIES

Attuali campi di ricerca / Research
sectors

E.G.'s **most recent research activity** is focused on the following themes:

1. Fluorescent organic materials for sensing devices.
2. Metal-dielectric surface interactions and plasmonics.
3. Fabrication, characterization and modeling of metal nanoparticles.
4. Surface Enhanced Raman Spectroscopy (SERS)

Recenti attività scientifiche/ Recent
Scientific Activities.

E.G.'s research activity is described in more than **100 scientific publications** (91 being in international journals with referee), more than **180** presentations at international scientific conference, of which many upon invitation. **H-index = 16** (Google Scholar)

E.G. is **referee** of the most qualified international scientific journals in her research field. Among them: J.Phys.Chem., Phys.Chem.Chem.Phys, Analyst, Appl.Opt., Optics Letters, J.Opt.Soc.Am.B, Chem.Phys.Lett.

Responsibility of national and international research programs during the last 5 years:

- **2011-2013**: Responsible of ISC group in the framework of Italian Project PRIN 2009 "Novel materials and processes for plasmonic sensors".
- **2011-2013**: Responsible of ISC group in the framework of Regione Toscana funded Project PAR-FAS - NABLA "Nanoparticelle metalliche prodotte per Ablazione Laser".
- **2009-2012**: Italian responsible in the framework of a bilateral collaboration with Bulgarian Academy of Sciences: CNR/BAS (Bulgaria).
- **2008-2009**: Responsible of ISC group in the framework of Italian Project PRIN 2007 "Plasmonic nanostructures and their interactions with chromophores: towards photonic devices and novel optical sensors".
- **2007-2011**: Project responsible in the framework of European Union COST Action MP0702.
- **since 2009**: Italian representative in the Management Committee of European Union COST Action MP0803.
- **2001-2011**: Italian responsible in the framework of a bilateral collaboration between CNR and CONACyT (Messico).

Pubblicazioni/ Books and
Articles

SOME SIGNIFICANT PAPERS IN INTERNATIONAL JOURNALS

R Pilot, A Zoppi, S Trigari, FL Deepak, **E Giorgetti**, R Bozio, "Wavelength dispersion of Raman enhancement in Ag/Au nanocages", **Physical Chemistry Chemical Physics** 17 (11), 7355-7365 (2015)

E. Giorgetti, P. Marsili, S. Cicchi, L. Lascialfari, M. Albiani, M. Severi, S. Caporali, M. Muniz-Miranda, A. Pistone and F. Giammanco, "Preparation of small size palladium nanoparticles by picosecond laser ablation and control of metal concentration in the colloid", **J. of Colloids and Interface Sciences** vol. 442, pp. 89-96 (2015).

A. Zoppi, S. Trigari, M. Muniz-Miranda and **E. Giorgetti**, "Gold nanostars as SERS active substrates by 1064-nm laser excitation", **RSC Advances**, 5 (11), 8523-8532 (2015)

E. Giorgetti, P. Marsili, S. Cicchi, L. Lascialfari, M. Albiani, M. Severi, S. Caporali, M. Muniz-Miranda, A. Pistone and F. Giammanco, "Preparation of small size palladium nanoparticles by picosecond laser ablation and control of metal concentration in the colloid", **J. of Colloids and Interface Sciences** vol. 442, pp. 89-96 (2015).

E. Giorgetti, M. Muniz Miranda, P. Canton, P. Marsili, C. Vergari and F. Giammanco, "TiO₂ nanoparticles obtained by laser ablation in water: influence of pulse energy and duration on the crystalline phase", **J. Alloys and Compounds**, [doi:10.1016/j.jallcom.2014.11.117](https://doi.org/10.1016/j.jallcom.2014.11.117)

Emilia Giorgetti, Paolo Marsili, Francesco Giammanco, Silvana Trigari, Cristina Gellini, Maurizio Muniz Miranda, "Study of the Surface Properties of Silver

Nanoparticles obtained by Pulsed Laser Ablation in Water”, **J. Raman Spectroscopy (in press)**

I. Fortunati, V. Weber, **E. Giorgetti**, C. Ferrante, “Two-Photon Fluorescence Correlation Spectroscopy of Gold Nanoparticles under Stationary and Flow Conditions”, DOI: 10.1021/jp506408j **J. Phys. Chem. C**, vol. 118, pp. 24081–24090 (2014).

L. Lascialfari, P. Marsili, S. Caporali, M. Muniz-Miranda, G. Margheri, A. Serafini, A. Brandi, **E. Giorgetti**, S. Cicchi, “Carbon nanotubes/laser ablation gold nanoparticles composites”, **Thin Solid Films** vol. 569, pp. 93-99 (2014).

G. Margheri, **E. Giorgetti**, P. Marsili, A. Zoppi, L. Lascialfari, S. Cicchi, “A plasmon waveguide resonator fluorescence device for the detection of heavy metal ions”, **Opt. Eng.** 53(7), 071816 (2014).

M. Muniz-Miranda, C. Gellini, P. Canton, P. Marsili and **E. Giorgetti**, “SERS and catalytically active Ag/Pd nanoparticles obtained by combining laser ablation and galvanic replacement”, **J. Alloys and Compounds** vol. 615, pp.S352-S356 (2014).

A. Zoppi, S. Trigari, **E. Giorgetti**, M. Muniz Miranda, M. Alloisio, A. Demartini, G. Dellepiane, S. Thea, G. Dobrikov and I. Timtcheva, “Functionalized Au/Ag nanocages as a novel fluorescence and SERS dual probe for sensing”, **J. of Colloids and Interface Science**, vol. 407, pp. 89-94 <http://dx.doi.org/10.1016/j.jcis.2013.06.012> (2013).

E. Giorgetti, P. Marsili, P. Canton, M. Muniz Miranda, S. Caporali, F. Giammanco, “Cu/Ag-based bifunctional nanoparticles obtained by one-pot laser assisted galvanic replacement”, **J. Nanoparticle Research**, DOI: 10.1007/s11051-012-1360-0, vol 15 (1), pp. 1-12 (2013)

E. Giorgetti, M. Muniz-Miranda, P. Marsili, D. Scarpellini, F. Giammanco, “Stable Gold Nanoparticles Obtained in Pure Acetone by Laser Ablation with Different Wavelengths”, **J. of Nanoparticle Research**, vol.14 n.1, DOI: 10.1007/s11051-011-0648-9 (2012)

Silvana Trigari, Alessio Rindi, Giancarlo Margheri, Stefano Sottini, Giovanna Dellepiane, and **Emilia Giorgetti**, “Synthesis and Modelling of Gold Nanostars with Tunable Morphology and Extinction Spectrum”, **J. Materials Chemistry**, vol. 21, 6531-6540 (2011)

Maurizio Muniz-Miranda, Cristina Gellini, **Emilia Giorgetti**, “Surface Enhanced Raman Scattering from copper nanoparticles obtained by laser ablation”, **J.Phys.Chem.C**, vol. 115, pp. 5021-5027 (2011).

E. Giorgetti, F. Giammanco, P. Marsili, A. Giusti, “Effect of ps post-irradiation on colloidal suspensions of differently capped AuNPs”, **J.Phys.Chem.C** vol. 115, pp. 5011-5020 (2011).

Francesco Giammanco, **Emilia Giorgetti**, Paolo Marsili, Anna, Giusti, “Experimental and theoretical analysis of photofragmentation of Au nanoparticles by picosecond laser radiation”, **Journal of Physical Chemistry C**, vol.114, pp. 3354-3363 (2010).

Marina Alloisio, Anna Demartini, Carla Cuniberti, Giovanna Dellepiane, Sushilkumar Jadhav, Sergio Thea, **Emilia Giorgetti**, Cristina Gellini, Maurizio Muniz-Miranda, “Polydiacetylene Functionalized Noble Metal Nanocages”, **Journal of Physical Chemistry C**, vol. 113, pp. 19475-19481 (2009).

E. Giorgetti, S. Cicchi, M. Muniz-Miranda, G. Margheri, T. DelRosso, A. Giusti, A. Rindi, G. Ghini, S. Sottini, A. Marcelli, P. Foggi, “Förster resonance energy transfer (FRET) with a donor–acceptor system adsorbed on silver or gold nanoisland films”, **Physical Chemistry Chemical Physics**, vol. 11, n.42, pp.9798-9803 (2009).

Marina Alloisio, Anna Demartini, Carla Cuniberti, Maurizio Muniz-Miranda, **Emilia Giorgetti**, Anna Giusti and Giovanna Dellepiane, “Photopolymerization of

Diacetylene-Capped Gold Nanoparticles” **Physical Chemistry and Chemical Physics**, vol.10, pp.2214-2220 (2008).

G. Margheri, T. Del Rosso, S.Sottini, S. Trigari, and **E.Giorgetti**, “All optical switches based on the coupling of surface plasmon polaritons”, **Optics Express**, vol.16, n.13, pp.9869-9883 (2008).

A.Giusti, **E.Giorgetti**, S.Laza, P.Marsili, F.Giammanco, “Multiphoton fragmentation of PAMAM G5-capped-gol-nanoparticles induced by picosecond laser irradiation at 532nm” **Journal of Physical Chemistry C** , vol.111, pp. 14984-14991 (2007).

Marina Alloisio, Anna Demartini, Carla Cuniberti, Giovanni Petrillo, **Emilia Giorgetti**, Anna Giusti and Giovanna Dellepiane, “Self-assembled monolayers of disulfide-functionalized diacetylenes on gold films and nanoparticles”, **Journal of Physical Chemistry C**, vol.111, pp.345-353 (2007).

E. Giorgetti, M. Muniz-Miranda, G. Margheri, A. Giusti, S. Sottini, M. Alloisio, C. Cuniberti, G. Dellepiane, “UV polymerisation of self-assembled monolayers of a novel diacetylene on silver: a spectroscopic analysis by Surface Plasmon Resonance and by Surface Enhanced Raman Scattering”, **Langmuir** , vol.22(3), pp.1129-1134, 2006.

E.Giorgetti, G.Margheri, T.DelRosso, S.Sottini, M.Muniz-Miranda, M.Innocenti, “A study of the degradation of Poly(3-octylthiophene)-based light emitting diodes by Surface Enhanced Raman Scattering”, **Applied Physics B**, vol. 79, pp.603-609, 2004

E. Giorgetti, G. Toci, M. Vannini, F. Giammanco, “Multiphoton absorption of solutions of polydiacetylene polyDCHD-HS measured using ps Z-scan at 1064 and 1500nm”, **Optics Communications**, vol. 217/1-6, pp. 431-439, 2003.

E.Giorgetti, G. Margheri, S. Sottini, G. Toci, M. Muniz-Miranda, L. Moroni and G. Dellepiane, “Optical characterization of quasi-monomolecular layers of the nonlinear polymer polyDCHD-HS”, **Physical Chemistry and Chemical Physics**, vol.4, n.12, pp. 2762-2767, 2002.

G. Balestrino, S. Martellucci, P.G. Medaglia, A. Paoletti, G. Petrocelli, A. Tebano, A. Tucciarone, F. Gelli, **E. Giorgetti**, S. Sottini, L. Tapfer, “Epitaxial LiNbO₃ thin films grown by Pulsed Laser deposition for optical waveguides”, **Applied Physics Letters**, vol.78, n.9, p.1204-1206, 2001.

E. Giorgetti, G. Margheri, S. Sottini, M. Casalboni, R. Senesi, E. Scarselli, R. Pizzoferrato, “Dye-doped Zirconia-based Ormosil planar waveguides: optical properties and surface morphology”, **The Journal of Non Crystalline Solids** , vol. 255, pp. 193-198 (1999).

L. Palchetti, **E. Giorgetti**, D. Grando, S. Sottini, “Efficient coupling between annealed K⁺ - Na⁺ ion exchanged channel waveguides and 10/125 single mode fibers at $\lambda=1.321 \mu\text{m}$.”, **IEEE Journal of Quantum Electronics**, vol.34, n.1, pp.179-189 (1998).

E. Giorgetti, D. Grando, L. Palchetti, S. Sottini, “Thermal annealing of K⁺-Na⁺ ion exchanged waveguides.”, **Optics Letters**, vol. 20, n. 12, pp. 1374-1376 (1995).

S. Sottini, D. Grando, L. Palchetti, **E. Giorgetti**, “Optical fiber-polymer film coupling by a tapered graded index glass guide”, **IEEE Journal of Quantum Electronics**, vol. 31, n. 6, pp. 1123-1130 (1995).

S. Sottini, **E. Giorgetti**, “Theoretical analysis of a new family of geodesic lenses”, **Journal of the Optical Society of America A**, vol. 4, pp. 346-351 (1987).

**ULTERIORI INFORMAZIONI /
ADDITIONAL INFORMATION**

Languages

Indicate your language proficiency: P – poor G - good E - excellent

| Language | speaking | reading | writing | Language | speaking | reading | writing |
|----------|----------|---------|---------|----------|----------|---------|---------|
| English | G | E | E | | | | |
| Spanish | E | E | E | | | | |
| French | P | G | P | | | | |

**TRATTAMENTO DEI DATI
PERSONALI, INFORMATIVA E
CONSENSO**

Il D.Lgs. 30/6/2003, n. 196 “Codice in materia di protezione dei dati personali” regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento .

La norma in considerazione intende come “trattamento” qualunque operazione o complesso di operazioni concernenti la raccolta, la registrazione, l'organizzazione, la conservazione, la consultazione, l'elaborazione, la modifica, la selezione, l'estrazione, il raffronto, l'utilizzo, l'interconnessione, il blocco, la comunicazione, la diffusione, la cancellazione e la distruzione di dati, anche se non registrati in una banca dati.

In relazione a quanto riportato, autorizzo il CNR al trattamento dei dati contenuti nel presente *curriculum vitae* e nella documentazione della quale fa parte integrante

(barrare la casella)

Si, acconsento