



PERSONAL INFORMATION

Claudia Triolo



Contrada R... 98020, Italy

+39 0965 211111

...

Sex: Female Date of birth: ... Italy

JOB Physics

WORK EXPERIENCE

1 Jan. 2013 – 31 Dec. 2015

PhD Student

PhD student in physics at University of Messina (Italy)

My job involves both experimental and theoretical studies:

- Experimental field: Techniques of scanning probe microscopy (AFM and SNOM) for: (a) Optical nanolithography below the diffraction limit on organic thin films. (b) Near-field analysis of the plasmonic behaviour of the metallic nanostructures. (c) Standard optical characterization techniques, including Raman spectroscopy. (d) In collaboration with ST Microelectronics (plant of Catania, Italy), I participated to the design of an innovative experimental system, based on the optical lever, for the measurement the thermo-mechanical deformations of power electronics devices induced by current pulses. The target is to propose a novel methodology in order to test the reliability of the power devices. This test is complementary with thermal stress analysis, a research topic developed over the past decade by the research group to which I belong.
- Theoretical field: Simulations based on Finite Elements Method to analyze the optical behaviour of metallic and organic nanostructures.

EDUCATION AND TRAINING

Sept. 2007- July 2010

Bachelor degree in Physics (108/110)

University of Messina (ME), Italy.

Sept. 2010- Oct. 2012

Master degree in Physics of Condensed Matter (110/110 cum laude)

University of Messina (ME), Italy.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

UNDERSTANDING

SPEAKING

WRITING

Listening

Reading

Spoken interaction

Spoken production

English

B1

B1

B1

B1

B1

French

B2

B2

B1

B1

B1

Claudia Triolo 08/02/2016

Computer skills Deep knowledge of MATLAB programming language, Visual Studio, Microsoft office, and of COMSOL Multiphysics software as simulation tool.

Driving licence B

ADDITIONAL INFORMATION

Publications

1. **C. Triolo, S. Patané, M. Mazzeo, S. Gambino, G. Gigli, M. Allegrini.** "Pure optical nano-writing on light- switchable spiropyrans/merocyanine thin film". OPTICS EXPRESS 22 (2014) 283-288.
2. **S. Panarello, C. Triolo, A. Testa, S. Patané, D. Patti, S. Russo.** "Thermal Stress and Mechanical Strain Real Time Mapping in Intelligent Power Switching Device". Proceedings of the 26th International Symposium on Power Semiconductor Devices & IC's, June 15-19, 2014 Waikoloa, Hawaii.
3. **C. Triolo, A. Cacciola, R. Saija, S. Trusso, M.C. Spadaro, F. Neri, P.M. Ossi, S. Patané.** "Near-Field Optical Detection of Plasmon Resonance from Gold Nanoparticles: Theoretical and Experimental Evidence". Plasmonics 10 (2015) 63-70.
4. **A. Cacciola, C. Triolo, O. Di Stefano, A. Genco, M. Mazzeo, R. Saija, S. Patané, S. Savasta.** "Subdiffraction Light Concentration by J-aggregate Nanostructures". ACS Photonics 2 (2015) 971-979.
5. **M. Allieta, M. Scavini, A. Naldoni, M. Coduri, S. Cappelli, C. Oliva, S. Santangelo, C. Triolo, S. Patané, A. Laschiari, V. Scagnoli.** "Interplay of structural and magnetic nanoscale phase separation in layered cobaltites". PHYSICAL REVIEW B 92 (2015) 054202.
6. **C. Triolo, E. Fazio, F. Neri, M.A. Mezzasalma, S. Trusso, S. Patané.** "Correlation between structural and electrical properties of PLD prepared ZnO thin films used as a photodetector material". Applied Surface Science 359 (2015) 266-271.
7. **S. Panarello, F. Garesci, C. Triolo, S. Patané, D. Patti, S. Russo.** "Reliability Model Application for Power Devices using Mechanical Strain Real Time Mapping". Proceedings of the 28th International Symposium on Power Semiconductor Devices & IC's, June 12-16, 2016 Prague, Czech Republic (SUBMITTED).

Conferences

1. POSTER PRESENTATION: **S. Panarello, C. Triolo, A. Testa, S. Patané, D. Patti, S. Russo.** "Thermal Stress and Mechanical Strain Real Time Mapping in Intelligent Power Switching Device". 26th International Symposium on Power Semiconductor Devices & IC's, June 15-19, 2014 Waikoloa, Hawaii.
2. POSTER PRESENTATION: **C. Triolo, A. Cacciola, R. Saija, S. Trusso, M.C. Spadaro, F. Neri, P.M. Ossi, S. Patané,** "Near-field plasmons from gold nanoparticles: theoretical and experimental evidence". 5th International Conference on NANO-structures Self-Assembly, July 7-11, 2014 Marseille, France.
3. POSTER PRESENTATION: **C. Triolo, S. Trusso, S. Savasta, S. Patané, R. Saija.** "Near-field plasmons from gold nanoparticles: theoretical and experimental evidence". COST Action MP1403 "Nanoscale Quantum Optics", April 9-10, 2015 Belgrade (Serbia).
4. ORAL PRESENTATION: **C. Triolo, A. Cacciola, O. Di Stefano, A. Genco, M. Mazzeo, R. Saija, S. Patané, S. Savasta.** "Plasmon-like Subdiffraction Light Concentration by J-aggregate Nanostructures". 3rd Conference Plasmonica 2015, July 1-3, 2015 Padova, Italy.
5. POSTER PRESENTATION: **S. Santangelo, P. Frontera, F. Pantò, A. Naldoni, F. Malara, M. Marelli, V. Del Santo, S. Patané, C. Triolo, P. Antonucci.** "Electro-Spun Hematite Fibrous Films as Photo-Anode for Water Splitting". International conference NanotechTALY 2015, November 25-27, 2015 Bologna, Italy.
6. ORAL PRESENTATION: **C. Triolo, A. Cacciola, A. Genco, M. Mazzeo, R. Saija, S. Patané, S. Savasta, O. Di Stefano.** "Localized Surface Polaritons in J-Aggregate Nanostructures". FisMat2015, 28 September-2 October 2015, Palermo, Italy.
7. POSTER PRESENTATION: **S. Panarello, F. Garesci, C. Triolo, S. Patané, D. Patti, S. Russo.** "Reliability Model Application for Power Devices using Mechanical Strain Real Time Mapping". 28th International Symposium on Power Semiconductor Devices & IC's, June 12-16, 2016 Prague, Czech Republic.

References

Prof. Salvatore Patané. Dipartimento di Scienze matematiche e informatiche, scienze fisiche e scienze della terra - Università degli studi di Messina.

Tel: +39 090 30671373

E-mail: salvatore.patan@unime.it

Dott. Davide Patti. Advanced Design Manager – ST Microelectronics (Catania)

Tel: +39 095 7104008

E-mail: davide.patti@st.com

Prof. Salvatore Savasta. Dipartimento di Scienze matematiche e informatiche, scienze fisiche e scienze della terra - Università degli studi di Messina.

Tel: +39 090 3066653

E-mail: salvatore.savasta@unime.it

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".