

Publicazioni (Dott. S. Petralia)

2021

106 M.G. Rizzo, S. Carnazza, L.M. De Plano, D. Franco, M.S. Nicolò, V. Zammuto, S. Petralia, G. Calabrese, C. Gugliandolo, S. Conoci, S.P.P. Guglielmino. Rapid detection of bacterial pathogens in blood through engineered phages-beads and integrated Real-Time PCR into MicroChip, *Sensors and Actuators B: Chemical* Volume 329, 15 February 2021, 129227, <https://doi.org/10.1016/j.snb.2020.129227>.

105 Giovanna Calabrese, Salvatore Petralia, Domenico Franco, Giuseppe Nocito, Claudia Fabbi, Lucia Forte, Salvatore Guglielmino, Stefano Squarzone, Francesco Traina, Sabrina Conoci. A new Ag-nanostructured hydroxyapatite porous scaffold: Antibacterial effect and cytotoxicity study, *Materials Science & Engineering C* 118 (2021) 111394, <https://doi.org/10.1016/j.msec.2020.111394>.

2020

104 E. L. Sciuto, S. Petralia, J. R. van der Meer, S. Conoci. Miniaturized Electrochemical Biosensor based on Whole Cell for Heavy Metal Ions Detection in Water, *Biotechnology and Bioengineering*. 2020;1–10. DOI: 10.1002/bit.27646

103 Giovanna Calabrese, Salvatore Petralia, Claudia Fabbi, Stefano Forte, Domenico Franco, Salvatore Guglielmino, Emanuela Esposito, Salvatore Cuzzocrea, Francesco Traina and Sabrina Conoci. Au, Pd and maghemite nanofunctionalized hydroxyapatite scaffolds for bone regeneration, *Regenerative Biomaterials*, 2020, 1–9. doi: 10.1093/rb/rbaa033

102 M.C. Davis, M. A. Messina, G. Nicolosi, S. Petralia, M.D. B. IV, C. K.S. Mayne, C. M. Dinon, C. J. Moss, B.P. Onac, and J. R. Garey. Surface runoff alters cave microbial communities. *Structure and Function- Plos One* PLoS ONE 15(5): e0232742. <https://doi.org/10.1371/journal.pone.0232742>

101 E. L. Sciuto, S. Petralia and S. Conoci. Innovative Lab-on-Disk Technology for Rapid and Integrated Analysis of Pathogen Nucleic Acids. *Lecture Notes in Electrical Engineering* 629, 2020, 215-220, https://doi.org/10.1007/978-3-030-37558-4_32

100 Laura M. De Plano, Santina Carnazza, Domenico Franco, Maria Giovanna Rizzo, Sabrina Conoci, Salvatore Petralia, Alessandra Nicoletti, Mario Zappia, Michela Campolo, Emanuela Esposito, Salvatore Cuzzocrea, and Salvatore P. P. Guglielmino. Innovative IgG Biomarkers Based on Phage Display Microbial Amyloid Mimotope for State and Stage Diagnosis in Alzheimer's Disease. *ACS Chem. Neurosci.* 2020, 11, 7, 1013-1026. <https://doi.org/10.1021/acscchemneuro.9b00549>

99 Giuseppe Granata, Salvatore Petralia*, Giuseppe Forte, Sabrina Conoci, Grazia Maria Letizia Consoli. Injectable supramolecular nanohydrogel from a micellar self-assembling calix[4]arene derivative and curcumin for a sustained drug release. *Materials Science and Engineering: C*, Volume 111, June 2020, 110842. <https://doi.org/10.1016/j.msec.2020.110842>.

98 E. L. Sciuto, S. Petralia, G. Calabrese, S. Conoci. Integrated Biosensor Platform for Nucleic Acids Extraction and Detection. *Biotechnology and Bioengineering* 2020, 117, <https://doi.org/10.1002/bit.27290>.

97 Salvatore Petralia*, Giuseppe Nocito, Sabrina Conoci and Salvatore Sortino. Enhancement of PCR Reaction Efficiency by Gold-Nanoparticles Immobilized at Microreactor Surface. G. Di Francia et al. (eds.), *Sensors and Microsystems, Lecture Notes in Electrical Engineering* 629, 2020, 183-187, https://doi.org/10.1007/978-3-030-37558-4_27

96 M. Urso, S. G. Leonardi, G. Neri, S. Petralia, S. Conoci, F. Priolo and S. Mirabella. Room temperature detection and modelling of sub-ppm NO₂ by low-cost nanoporous NiO film. *Sensors and Actuators B: Chemical*, 2020, 305, 127481

2019

95 Giuseppe Nocito, Salvatore Petralia*, Milo Malanga, Szabolcs Beni, Giovanna Calabrese, Rosalba Parenti, Sabrina Conoci and Salvatore Sortino. Biofriendly Route to Near-Infrared-Active Gold Nanotriangles and Nanoflowers through Nitric Oxide Photorelease for Photothermal Applications. *ACS Appl. Nano Mater.* 2019, 25, 14638-14643. <https://doi.org/10.1021/acsanm.9b01925>.

94 Mario Urso, Salvatore Gianluca Leonardi, Giovanni Neri, Salvatore Petralia, Sabrina Conoci, Francesco Priolo, Salvo Mirabella, Acetone sensing and modelling by low-cost NiO nanowalls, *Materials Letters*, 2020, 262, 127043, <https://doi.org/10.1016/j.matlet.2019.127043>

93 Salvatore Petralia Giuseppe Forte, Massimo Zimbone, Sabrina Conoci. The cooperative interaction of Triplex Forming Oligonucleotides on DNA-triplex formation at electrode surface: Molecular Dynamics studies and experimental evidences. *Colloids and Surfaces B: Biointerfaces* 2020, 187, 110648. <https://doi.org/10.1016/j.colsurfb.2019.110648>

92 M. Perez-Lloret, A. Fraix, S. Petralia, S. Conoci, V. Tafani, G. Cutrone, A. Vargas-Berenguel, R. Gref, and S. Sortino. One-Step Photochemical Green Synthesis of Water-Dispersible Ag, Au, and Au@Ag Core–Shell Nanoparticles, *Chem. Eur. J.* 2019, 25, 14638-14643. <https://doi.org/10.1002/chem.201903076>.

91 Salvatore Petralia*, Daniele Motta, Sabrina Conoci EWOD Silicon Biosensor for Multiple Nucleic Acids Analysis, *Biotechnology and Bioengineering* 2019, Vol 116 (8), 2087-2094 <https://doi.org/10.1002/bit.26987>

90 S. Battaglia, S. Petralia*, N. Vicario, D. Cirillo, S. Conoci An innovative silicon-chip for sensitive real time PCR improvement in pathogen detection *Analyst* 2019, *Analyst*, 2019, 144, 2353-2358 DOI. 10.1039/C9AN00006B

89 R. Verardo, S. Petralia*, C. Schneider, E. Klaric, M. G. Amore, G. Tosto and S. Conoci. A Silicon-Based Biosensor for Bacterial Pathogens Detection. 2019, eds.), *Sensors, Lecture Notes in Electrical Engineering* 539, 141-145, (https://doi.org/10.1007/978-3-030-04324-7_19).

88 S. Petralia*, E. L. Sciuto, M. A. Messina, M. F. Santangelo, S. Libertino and S. Conoci. An Innovative Optical Chem-Sensor Based on a Silicon Photomultipliers for the Sulfide Monitoring, 2019, *Sensors, Lecture Notes in Electrical Engineering* 539, 75-81, (https://doi.org/10.1007/978-3-030-04324-7_11).

87 F. Rundo, S. Petralia, G. Fallica and S. Conoci, A Nonlinear Pattern Recognition Pipeline for PPG/ECG Medical Assessments 2019, *Sensors, Lecture Notes in Electrical Engineering* 539, 473-480, (https://doi.org/10.1007/978-3-030-04324-7_57)

86 S. Petralia*, E. L. Sciuto, S. Mirabella, F. Priolo, F. Rundo and S. Conoci Nickel Based Biosensor for Biomolecules Recognition. 2019, *Sensors, Lecture Notes in Electrical Engineering* 539, 105-109 (https://doi.org/10.1007/978-3-030-04324-7_14)

85 E. L. Sciuto, S. Petralia and S. Conoci, A Novel Lab-on-Disk System for Pathogen Nucleic Acids Analysis in Infectious Diseases, 2019, *Sensors, Lecture Notes in Electrical Engineering* 539, 117-124, (https://doi.org/10.1007/978-3-030-04324-7_16)

84 R. Iemmolo Rosario, M. Guarnaccia, S. Petralia, S. Cavallaro and S. Conoci Lab-on-Disk Platform for KRAS Mutation Testing, 2019 *Sensors, Lecture Notes in Electrical Engineering* 539, 437-445. (https://doi.org/10.1007/978-3-030-04324-7_53)

83 M. A. Messina, F. Raudino, A. Fiumara, S. Conoci and S. Petralia Novel Paper-Based Biosensor for Urinary Phenylalanine Measurement for PKU Therapy Monitoring. 2019 *Sensors, Lecture Notes in Electrical Engineering* 539, 195-200 (doi:10.1007/978-3-030-04324-7_26)

2018

82 E.L. Sciuto, C. Bongiorno, A. Scandurra, S. Petralia, T. Cosentino, S. Conoci, F. Sinatra and S. Libertino Functionalization of Bulk SiO₂ Surface with Biomolecules for Sensing Applications: Structural and Functional Characterizations. *Chemosensors* 2018, 6(4), 59.

81 S. Petralia*, N. Vicario, G. Calabrese, R. Parenti and S. Conoci. An Advanced, Silicon-Based Substrate for Sensitive Nucleic Acids Detection. *Sensors* 2018, 18, 3138; doi:10.3390/s18093138.

80 M.A. Messina, S. Petralia Biosensori: progressi ed applicazioni in clinica diagnostica. *La Chimica e l'Industria* 2018 n.4 DOI: <http://dx.medra.org/10.17374/CI.2018.100.4.58>.

79 Leonardi, M.J. Lo Faro, S. Petralia, B. Fazio, P. Musumeci, S. Conoci, A. Irrera, F. Priolo. Ultrasensitive Label- and PCR-free Genome Detection based on Cooperative Hybridization of Silicon Nanowires Optical Biosensors. *ACS Sensor* – 2018, 3, 1690- 1697 (10.1021/acssensors.8b00422).

78 S.Petralia, Nanomateriali: generalita' e Rischi nell'utilizzo. *Il Chimico Italiano* (2018) Anno XXVIII

77 S.Petralia, G. Ventimiglia Photodecorated Surface with Nanoparticles: Versatile Substrates for Technology Applications *Bionanoscience* (2018) Vol 8- Issue 2 pp 609-616 <https://doi.org/10.1007/s12668-018-0517-4>

76 S.Petralia, E. Luigi Sciuto, M. F. Santangelo, S. Libertino, M. A. Messina and S. Conoci Sulfide Species Optical Monitoring by a Miniaturized Silicon Photomultiplier, *Sensors* 2018, 18(3), 727; doi:10.3390/s18030727.

75 S. Petralia, E. L. Sciuto, M. A. Messina, A. Scandurra, S. Mirabella, F. Priolo, S. Conoci, Miniaturized and multi-purpose electrochemical sensing device based on thin Ni oxides. *Sensors and Actuators B* 263 (2018) 10–19

2017

74 S. Conoci, F. Rundo, S. Petralia, S. Battiato Advanced skin lesion discrimination pipeline for early melanoma cancer diagnosis towards PoC devices. *European Conference on Circuit Theory and Design (ECCTD) 2017* DOI 10.1109/ECCTD.2017.8093310

73 S. Petralia, F. Rundo, S. Conoci, M. L. Di Pietro, E. L. Sciuto, S. Mirabella Electrochemical biosensor for PCR free nucleic acids detection: A novel biosensor containing three planar microelectrodes for melocular diagnostic applications. *European Conference on Circuit Theory and Design (ECCTD) 2017* DOI 10.1109/ECCTD.2017.8093334

72 S. Petralia, M. G. Amore, M. E. Castagna, G. Tosto, S. Conoci. Electrically actuated microfluidic biosensors: A novel silicon 48 microwells device for biosensing applications *European Conference on Circuit Theory and Design (ECCTD) 2017* DOI 10.1109/ECCTD.2017.8093339

71 S. Petralia, F. Rundo, S. Conoci, E. L. Sciuto, S. Mirabella, F. Priolo. Miniaturized electrochemical cells for sensing applications: Silicon device containing three planar microelectrodes for electrochemical sensing *European Conference on Circuit Theory and Design (ECCTD) 2017* DOI 10.1109/ECCTD.2017.8093335

70 M.A. Messina, C. Meli S, Conoci S. Petralia A facile method for urinary phenylalanine measurement on paper-based lab-on-chip for PKU therapy monitoring *Analyst*, 2017, 142, 4629.

69 S. Petralia, and Sabrina Conoci. PCR Technologies for Point of Care Testing: Progress and Perspectives. *ACS Sensors*. 2017, 2, 876–891.

68 F. Rundo, S. Conoci, S. Petralia and G. L. Banna, Advanced Bio-inspired Point of Care for Skin Cancer Early Detection. *SL Clin Med Oncol*. 2017; 1(1):111.

67 Rundo, S. Conoci, S. Petralia Decreto “Sicurezza delle Città”: un esempio concreto di sicurezza integrata dei centri urbani. *Sicurezza e Giustizia* 2017 (N. II_MMXVII).

66 D. Afonso, S. Valetti, A. Fraix, C. Bascetta, S. Petralia, S. Conoci, A. Feiler and S. Sortino, Multivalent mesoporous silica nanoparticles photo-delivering nitric oxide with carbon dots as fluorescent reporters. *Nanoscale* (2017), 9, 13404-13408.

65 N. Giambanco, S. Petralia S. Conoci, C. Messineo, G. Marletta Ionic strength-controlled hybridization and stability of hybrids of KRAS DNA single-nucleotides: A surface plasmon resonance study. *Colloids and Surfaces B: Biointerfaces* 158 (2017) 41–46

64 S. Petralia, T. Cosentino, F. Sinatra, M. Favetta, P. Fiorenza, C. Bongiorno, E.L. Sciuto, S. Conoci, S. Libertino, Silicon Nitride Surfaces as Active Substrate for Electrical DNA Biosensors, *Sensors and Actuators B* 252 (2017) 492–502

63 S. Petralia, E. L. Sciuto, M. L. Di Pietro, M. Zimbone, M. G. Grimaldi and S. Conoci. Innovative Chemical Strategy for PCR-free Genetic Detection of Pathogens by an Integrated Electrochemical Biosensor Analyst, (2017),

42, 2090–2093.

- 62** S Petralia M. E. Castagna, , A. Beninato, V. Sinatra, S. Baglio and S. Conoci Magnetic Beads Compatibility as DNA Hybridization Labels in Integrated Thermal-Magnetic Biosensor Bionanoscience (2017), Volume 7, (3) pp 485–491.
- 61** M. Guarnaccia, R. Iemmolo, S. Petralia, S. Conoci, S. Cavallaro. Miniaturized Real-Time PCR on a Q3 System for Rapid KRAS Genotyping Sensors. Sensors (2017), 17, 831; doi:10.3390/s17040831
- 60** S. Conoci, S. Petralia, F. Rundo e S. Battiato. Sistemi Point of care per le Indagini genetiche in ambito forense. Sicurezza e Giustizia (2017) I/ MMXVII pp. 38-39.
- 59** S. Petralia, G. Ventimiglia, S. Ceschia, M. Gasparin, R. Verardo A Novel Silver Coating for Antigen-Microarray Preparation Suitable for Application on Antibody Recognition. BioNanoSci. (2017) 7 (3) 449–455
- 58** S. Petralia, S. Mirabella, V. Strano e S. Conoci A Miniaturized Electrochemical System Based on Nickel Oxide Species for Glucose Sensing Applications. Bionanoscience (2017) 7, (1) 58-63
- 57** S. Petralia, E. Sciuto, S. Conoci A Novel Miniaturized Biofilter based on Silicon Micropillars for Nucleic Acid Extraction Analyst (2017) 142, 140-146.

2016

- 56** I. Di Bari, A. Fraix, R. Picciotto, A. R. Blanco, S. Petralia, S. Conoci, G. Granata, G. M. L. Consoli and S. Sortino Supramolecular activation of the photodynamic properties of porphyrinoid photosensitizers by calix[4]arene nanoassemblies RSC advances (2016) 6, 105573.
- 55** A. Beninato, V. Sinatra, G. Tosto, M.E. Castagna, S. Petralia, S. Conoci S. Baglio An inductive integrated biosensor with dual detection system for extended operating ranges IEEE Transaction and measurement (2016) DOI 10.1109/TIM.2016.2619000.
- 54** S. Petralia and S. Conoci Il ruolo della chimica nello sviluppo dei Lab-on-chip. La chimica e l'Industria (2016) vol 4 DOI: <http://dx.medra.org/10.17374/CI.2016.98.5.40>
- 53** N. Marino, S. Petralia, M. Perez-Lloret, J. Mosinger, S. Conoci and S. Sortino. Graphene oxide nanohybrid photoreleasing nitric oxide. Journal of Material Chemistry B 4 (35) (2016) 5763-5948.
- 52** G. Ventimiglia, E. Alessi, S. Petralia A bridge-like solution for Universal Microarray applications Sensors and Actuators B 232 (2016) 102–106.
- 51** S. Petralia E. Castagna, M. O Spata, M. G. Amore and S. Conoci A point of care real time PCR platform based on Silicon technology. Biosensor Journal (2016) 5:1.
- 50** S. Petralia, M. E. Castagna, D. Motta, S. Conoci Miniaturized electrically-actuated microfluidic system for sensor applications. Bionanoscience (2016) BioNanoSci. (2016) 6: 139, doi: 10.1007/s12668-016-0204-2
- 49** M.F. Santangelo, E.L. Sciuto, A.C. Busacca, S. Petralia, S. Conoci and S. Libertino Si Photomultipliers for Bio-Sensing Applications IEEE Journal of Selected Topics in Quantum Electronics Vol. 22, N. 3, (2016)

2015

- 48** M.F. Santangelo, E.L. Sciuto, A.C. Busacca, S. Petralia, S. Conoci and S. Libertino SiPM as miniaturised optical biosensor for DNA-microarray applications. Sensing and BioSensing Research 2015, 6 95–98
- 47** S. Petralia, M. E Castagna, E. Cappello, F. Puntoriero, E. Trovato, A. Gagliano and S. Conoci, A miniaturized silicon based device for Nucleic Acids electrochemical Detection. Sensing and Bio-Sensing Research 2015, 6, 90–94

46 M. E. Castagna, S. Petralia, E. Cappello; A. Beninato; V. Sinatra; S. Baglio and S. Conoci, A novel silicon based mags-biosensor for nucleic acid detection by magnetoelectronic transduction. *Sensing and Bio-Sensing Research* 2015 6, 85–89.

45 S. Petralia, G. Panvini G. Ventimiglia A novel methodology for wettability process control of buried silicon microchannels for molecular diagnostic applications *Bionanoscience* (2015) 5:150-155.

44 M. Messina, T. Grech, F. Fiorenza, A. Marletta, P. Valenti and S. Petralia. Sulfidic spring in the gypsum karst system of Monte Conca (Italy): chemistry and microbiological evidences. *Intern. Journal of Speleology* (2015), 44 (2), 125-139.

2014

43 S. Petralia, G. Ventimiglia A facile and fast chemical process to manufacture epoxy-silane coating on plastic substrate for biomolecules sensing applications *Bionanoscience* (2014) *BioNanoSci.* (2014) 4:226–231.

42 M. Guarnaccia, G. Gentile, E. Alessi, C. Scheider, S. Petralia and S. Cavallaro Is this the Real Time for Genomics? *Genomics* (2014) Vol 103, Issues 2–3, 177–182.

2013-2010

41 G. Ventimiglia S. Petralia Recent Advances in DNA Microarray Technology: An Overview on Production Strategies, Detection Methods and Applications. *Bionanoscience* (2013) 3:428–450

40 S. Petralia, R. Verardo E. Klaric, S. Cavallaro, E. Alessi, C. Schneider, In-Check system: A highly integrated silicon Lab-on-Chip for sample preparation, PCR amplification and microarray detection of nucleic acids directly from biological samples *Sensors and Actuators B: Chemical* 187 (2013) 99-105.

39 S. Petralia, E. Alessi, M. G. Amore, C. Schneider, E. Klaric, R. Verardo In-Check System: a highly integrated silicon lab-on-chip for sample preparation, PCR amplification and microarray detection towards the molecular diagnostics point-of-care. 14th International Meeting on Chemical Sensors (2012) DOI 10.5162/IMCS2012/4.2.2

38 S. Petralia, E. Alessi, M. G. Amore, C. Schneider, E. Klaric, R. Verardo Molekula-Diagnose an Point-of-care Laborelektronik lab-on-Chip MED engineering (2012)

37 G. Ventimiglia, E. Alessi and S. Petralia The Biophysics of Nucleic Acids Sensing by Hybridization on a Lab-on-Chip Device. *Sensors & Transducers Journal*, Vol. 139 G., Issue 4, April 2012, pp. 152-16.

36 Ventimiglia S. Petralia Inorganic nanoparticles properties applications and production photosynthetic routes. *Recent Res. Devel. Photochem, Photobiol*; 8(2012): 99-141 ISBN: 978-81-7895-542-1

35 S. Petralia and G. Ventimiglia Stability evaluation of protein coating for sensing: an application to silicon based lab-on-chip device. *Sensors & Transducers Journal*, Vol. 137, Issue 2, February 2012, pp. 215-225

34 S. Petralia T. Barbuzzi, and G. Ventimiglia Polymerase chain reaction efficiency improved by water soluble β -Cyclodextrins capped platinum nanoparticles. *Materials Science and Engineering C* 32 (2012) 848–850

33 S. Petralia Langmuir-Schäfer film of calix[4]pyrrole exhibiting sensing properties with gas anesthetic agent sevoflurane *Sensor and Transducers* 2011 128-5 (115-122)

32 Foglieni B.; Brisci A.; San Biagio F.; Di Pietro P.; Petralia S.; Conoci S.; Ferrari M.; Cremonesi L. Integrated PCR amplification and detection processes on a Lab-on-Chip platform: a new advanced solution for molecular diagnostics. *Clinical chemistry and laboratory medicine: CCLM* / 2010;48(3):329-36

2008-2001

31 Callari F., S. Petralia, S. Conoci and S. Sortino Light-triggered DNA release by dynamic monolayer films. *New J. Chem.*, 2008, 32, 1899 - 1903,

30 E.B. Caruso, S. Petralia, S. Conoci, S. Giuffrida, S. Sortino Photodelivery of Nitric Oxide from water-soluble Platinum Nanoparticles. *J.A.C.S.* 2007 129(3) 480-481.

- 29** S. Giuffrida, G. Ventimiglia, S. Petralia, S. Conoci, and S. Sortino Facile light-triggered one-step synthesis of small and stable platinum nanoparticles in aqueous medium from a beta-cyclodextrin host-guest complex. *Inorganic Chemistry* (2006), 45(2), 508-510.
- 28** Conoci, S. S. Petralia, P. Samori, F.M. Raymo, S. Di Bella, S. Sortino Optically transparent, ultrathin Pt films as versatile metal substrates for molecular optoelectronics. *Advanced Functional Materials* (2006), 16(11), 1425-1432.
- 27** S. Sortino, S. Petralia, S. Di Bella, M. Tomasulo, F.M. Raymo, A multistate ensemble of molecular switches. *New Journal of Chemistry* (2006), 30(4), 515-517.
- 26** S. Giuffrida, G. Condorelli, L.L.; Costanzo, G. Ventimiglia, M. Favazza, S. Petralia, I.L. Fragalà, Luminescent CeCl_3 nanoparticles by $\text{Tris}(1,1,1,5,5,5\text{-hexafluoro-2,4-pentanedionato})\text{cerium diglyme}$ photolysis in chlorinated solvents. *Inorganica Chimica Acta* (2006), 359(12), 4043-4052.
- 25** F. Callari, S. Petralia, S. Sortino, Highly photoresponsive monolayer-protected gold clusters by self-assembly of a cyclodextrin-azobenzene-derived supramolecular complex. *Chemical Communications* (2006) (9) 1009-1011.
- 24** S. Conoci, P. Di Pietro, S. Petralia, M.G. Amore, F. San Biagio, G. Alaimo, G. Iacono, E. Alessi, D. Ricceri, G. Di Trapani, F. Di Francesco and M. Palmieri Fast. Efficient Nucleic Acid Testing by ST's In-Check™ Lab-on-Chip Platform. *NSTI-Nanotech 2006*, www.nsti.org, ISBN 0-9767985-7-3 Vol. 2, 2006
- 23** S. Sortino, S. Di Bella, S. Conoci, S. Petralia, M. Tomasulo, E.J. Palsiat, and F. M. Raymo Electrochemical Switching of Chromogenic Monolayers Self-Assembled on Transparent Platinum Electrodes *Advanced Materials* (2005). 17(11) 1390-1393.
- 22** A. Pirovano, S. Conoci, R. Sotgiu, S. Petralia, and F. Buonocore, Organic Electrically Bistable Materials for Non-Volatile Memory Applications. *Solid State Electronics* (2005) vol 49, 1820-1825.
- 21** S. Petralia, C. Spatafora, C. Tringali, M.C. Foti and S. Sortino. Hydrogen atom abstraction from resveratrol and two lipophilic derivatives by tert-butoxyl radicals. A laser flash photolysis study. *New J. Chem.* (2004) 28, 1 4 8 4 – 1 4 8 7.
- 20** S. Casilli, S. Sortino, S. Petralia, C. Malitesta, S. Conoci and L. Valli. Piezoelectric sensor functionalized by a self-assembled bipyridinium derivative: characterization and potential application in the detection of heavy metal ions. *Biosensors and Bioelectronics*. (2004) 2004, 20 1190-1195.
- 19** S. Di Bella, S. Sortino, S. Conoci, S. Petralia, S. Casilli and L. Valli. Langmuir-Schäfer Films of an Amphiphilic Ruthenium Complex Bearing an "Almost-Naked" Multi-Charged Head-Group. *Inorganic Chemistry*. (2004), 43, 5368-5372.
- 18** S. Sortino, S. Petralia, S. Conoci and S. Di Bella. Monitoring photoswitching of azobenzene-based self-assembled monolayers on a metal surface by UV-Vis spectroscopy in the transmission mode. *J. Mat. Chem.*, (2004) 14, 811-813.
- 17** S. Sortino, S. Petralia, G. Condorelli, S. Conoci, S. Di Bella *Commutatori Molecolari: Nanostrutture e Sistemi Fotocontrollati di Complessi di Rutenio Multifunzionali*. *La Chimica e l'Industria* 85, 2003, 55-57
- 16** S. Sortino, S. Petralia, S. Conoci and S. Di Bella. Redox switchable Self-Assembled Monolayers of functional Ruthenium(III/II) complexes on optically transparent platinum electrodes. *Mat. Sci. And Eng. C*. 23 (2003), 857-860.
- 15** S. Sortino, S. Petralia, and S. Di Bella. Reversible Light-Driven Redox Switching of Multifunctional Dipolar Ruthenium (III/II) Pentammine(4,4'-bipyridinium) Complexes *J. Am. Chem. Soc.* 2003; 125(19); 5610-5611.
- 14** S. Sortino, S. Petralia, S. Conoci and S. Di Bella. Novel Self-Assembled Monolayers of Dipolar Ruthenium (III/II) pentammine(4,4'-Bipyridinium) complexes on ultrathin platinum films as redox molecular switches. *J. Am. Chem. Soc.* 2003, 125, 1122-1123.
- 13** S. Sortino, S. Petralia, G. C. Condorelli, S. Conoci and G. Condorelli. A Novel Photoactive Self-Assembled Monolayer for Immobilization and Cleavage of DNA. *Langmuir* 2003, 19, 536-539.

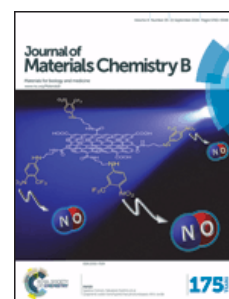
- 12** S. Sortino, S. Petralia, and M.C. Foti. Absolute rate constants and transient intermediates in the free-radical induced peroxidation of Y-terpinene, an unusual hydrocarbon antioxidant. *New J. Chem.*, 2003 27, 1563-1567.
- 11** S. Sortino, S. Petralia, B. Pignataro G. Marletta, S. Conoci and L. Valli. Langmuir-Schäfer films of a new calix[4]pyrrole-based macrocycle exhibiting induced chirality upon binding with chiral alcohol vapours. *New J. Chem.* 2003, 27, 615-618.
- 10** S. Sortino, S. Petralia, G. Condorelli, S. Conoci, L. Valli and R. Rella. Langmuir-Schäfer Films of a Tailored Calix[4]Pyrrole as Active Layers in Chemical Sensor, *Proceedings Sensor for Environmental control (Envsens 2)* 2003.
- 9** S. Sortino, S. Petralia, R. Darcy, R. Donohue and A. Mazzaglia. Photochemical outcome modification of diflunisal by a novel cationic amphiphilic cyclodextrin. *New J. Chem.* 2003, 27, 602-608.
- 8** S. Sortino, S. Petralia, G. C. Condorelli and G. Marconi, Direct spectroscopic evidences that the photochemical outcome of flutamide in a protein environment is tuned by modification of the molecular geometry. A comparison with the photobehavior in cyclodextrin and vesicles. *Helv. Chim. Acta.* 2003 (86) 266-273.
- 7** S. Sortino S. Petralia C. Spatafora; C. Tringali. Caratterizzazione delle proprietà "free-Radical Scavenging" del resveratrolo e suoi derivati (2003). VI Convegno di Chimica delle Sostanze Naturali NAT6 Vietri sul Mare (Salerno). 29 Settembre 1 Ottobre 2003. pp. P43.
- 6** S. Sortino, S. Petralia, G. Compagnini, S. Conoci and G. Condorelli, Light-Controlled Nitric Oxide Generation from a Novel Self-Assembled Monolayer on Gold Surface. *Angew. Chem. Int. Ed.* 2002, 41, 1914-1917.
- 5** M. D. Ricceri, G. Scicolone, S. Conoci, S. Coffa, S. Petralia and S. Sortino. Bacterio-Rhodopsin thin film as active layers in optical memory devices. *Proceedings. AIV* 2002.
- 4** S. Conoci, S. Coffa, S. Sortino, S. Petralia, G. Marletta, B. Pignataro, L. Valli. Molecular recognition of alcohol vapours by novel Langmuir-Schäfer Calix[4]pyrrole thin film. *Proceedings. AIV* 2002
- 3** S. Sortino, G. Marconi, S. Petralia, and G. Condorelli, Photobinding of Flutamide to Phospholipid Vesicles: Additional Evidences for Photoprocess Unexpectedly Triggered by Conformational Changes in the Bilayer. *Helv. Chim. Acta*, 85, 2002, 1407-1415.
- 2** S. Sortino, S. Petralia, F. Bosca and M. A. Miranda. Irreversible photo-oxidation of propranolol triggered by self-photogenerated singlet molecular oxygen. *Photochem. Photobiol. Sci.*, 2002, 1, 136-140.
- 1** S. Sortino, S. Giuffrida, G. De Guidi, R. Chillemi, S. Petralia, G. Marconi, G. Condorelli and S. Sciuto. The photochemistry of Flutamide and its inclusion complex with beta-Cyclodextrin. Dramatic effect of microenvironment on the nature and on the efficiency of the photodegradation pathways. *Photochem. and Photobiol.* 2001, 73 (1), 6-13.

Cover page

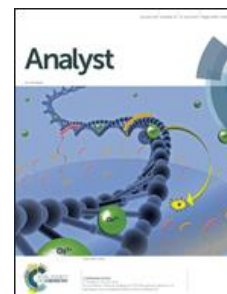
•**2008** - Hot Paper and Cover Page Fiorella L. Callari **Salvatore Petralia** Sabrina Conoci and Salvatore Sortino Light-triggered DNA release by dynamic monolayer films -, New J. Chem. 2008, 32(11), 1899-1903



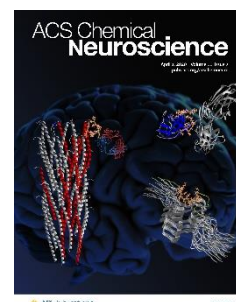
2016 – Hot Paper and Cover Page Nino Marino, **Salvatore Petralia**, Marta Perez-Lloret, Jiri Mosinger, Sabrina Conoci and Salvatore Sortino Graphene oxide nanohybrid photoreleasing nitric oxide by Journal Material Chemistry B, 2016, 4, 5763–5948



2017 – Cover Page **S. Petralia**, E. L. Sciuto, M. L. Di Pietro, M. Zimbone, M. G. Grimaldi and S. Conoci. Innovative Chemical Strategy for PCR-free Genetic Detection of Pathogens by an Integrated Electrochemical Biosensor Analyst, (2017), doi 10.1039/C7AN00202E

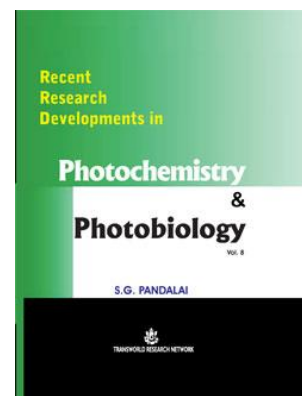


2020 L. M. De Plano, S. Camazza, D. Franco, M. G. Rizzo, S. Conoci, **Salvatore Petralia**, A. Nicoletti, M. Zappia, M. Campolo, E. Esposito, S. Cuzzocrea, and S. P. P. Guglielmino. Innovative IgG Biomarkers Based on Phage Display Microbial Amyloid Mimotope for State and Stage Diagnosis in Alzheimer's Disease. ACS Chem. Neurosci. 2020, 11, 7.



Capitolo di libro

2012 Recent Res. Devel. Photochem, Photobiol; ISBN: 978-81-7895-542-1 G. Ventimiglia **S. Petralia** Inorganic nanoparticles properties applications and production photosynthetic routes. Vol 8: pp. 99-141



2019 **Sensors** *Proceedings of the Fourth National Conference on Sensors, February 21-23, 2018, Catania, Italy*



Brevetti

- 1) **EP2275586(A3)**, (29 aprile 2005). Inventori: Conoci S, Petralia S. Titolo: Method for producing optically transparent noble metal films.
- 2) **US8017221-B2** (13 sett 2011) Inventori: Conoci S, Petralia S, Sotgiu R, Pirovano A, Titolo: Organic electrically bistable material and its use for producing a memory switch.
- 3) **US 7,902,070 B2** (8 Marzo 2011) Inventori: Conoci S, Petralia S, Titolo: Method and system for producing optically Transparent Noble Film
- 4) **US 9,708,714 B2** (priorita' 06-09-2013) Inventori S. Petralia, G. Ventimiglia. Title: Photochemical process for decorating surfaces with nanoparticles.
- 5) **US8766006 (B2)** (1 luglio 2014) Inventori: Conoci S, Sortino S, Petralia S. Titolo Use of nitroaniline derivatives for the production of nitric oxide,
- 6) **EP35456312-A1, US 2019383834 A1, IT 102016000120204** (28 novembre 2016) Titolo: Mimitopi conformazionali per il rilevamento di anticorpi specifici. Inventori: Guglielmino Salvatore, De Plano Laura Maria, Carnazza Santina, Franco Domenico, Nicoletti Alessandra, Zappia Mario, Conoci Sabrina, Petralia Salvatore
- 7) **IT N. 102017000081018** (18 luglio 2017) Titolo: Processing of electrophysiological signals, Inventori: Francesco Rundo, Piero Giorgio Fallica, Sabrina Conoci, Salvatore Petralia, Massimo Cataldo Mazzillo
- 8) **IT 102020000030230** (09/12/2020) Inventori: CONOCI Sabrina, TRAINA Francesco, PETRALIA Salvatore Titolo Metodo per il trattamento antibatterico di una superficie solida.