Bianco Stefano

Curriculum Vitae

PERSONAL INFORMATION

First Name / Surname Stefano Bianco

Current affiliation Applied Science and Technology Department, Politecnico di Torino, Corso Duca degli Abruzzi 24, 10129 Torino, Italy

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Nationality Italian

Date of birth

EDUCATION

- ✓ PhD in Electronic Devices, March 2nd, 2007, at the "Scuola di Dottorato" of the Politecnico di Torino.
  Thesis title: *"Application of microcantilever for physical and biological detection"*.
  Supervisor: Prof. C. F. Pirri.

- ✓ Degree in Physics, January 23rd, 2003, at the Università degli Studi di Torino. Final score: 110/110 cum laude.
  Thesis title: *"Caratterizzazione di rivelatori nucleari con microfasci ionici"* (in Italian)
  Supervisors: Prof. C. Manfredotti and Dr. S. Beolè.

- ✓ Maturità scientifica, July 1996, at the "Liceo L. Des Ambrois" of Oulx (To). Final score: 60/60.

Schools:

- 2009, 09-11 March, Valencia (Spain): "Advanced school on hybrid nanostructured materials for photovoltaic applications" at University of Valencia.
- 2008, 27-29 October, Trieste (Italy): "Workshop on Nanoscience for Solar Energy Conversion" at ICTP.

WORK ESPERIENCE

Current Position:

Since October 24th, 2016, S. Bianco is a Researcher (ricercatore a tempo determinato ai sensi dell'art. 24 comma 3 lettera b) Legge n. 240/2010) at the Applied Science and Technology Dept. of the Politecnico di Torino.
He received the Abilitazione Scientifica Nazionale in Experimental Physics of Matter as Professore II fascia in April 2017.

Research Experience:

- ✓ January 2015 – October 2016

S. Bianco was a Senior Post Doc at the Applied Science and Technology Dept. of the Politecnico di Torino. His research activity was focused on the application of graphene-based materials for advanced optical sensors and for energy storage devices.

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✓ December 2009 – December 2014

S. Bianco was a Post Doc at the Center for Space Human Robotics of the Italian Institute of Technology (IIT). In CSHR@PoliTo, S. Bianco coordinated the activity of the PV group. He was involved in synthesis, characterization and customization of nanomaterials for 3rd generation photovoltaics and energy harvesting applications.

✓ July 2009 – November 2009

S. Bianco won a Fellowship as Junior Researcher at the Materials Science and Chemical Engineering Dept. of the Politecnico di Torino, co-founded by Regione Piemonte. His research activity was devoted to the development of innovative materials for energy harvesting applications. During this period S. Bianco was collaborating with the company Solaronix (Aubonne, Lausanne, Switzerland), for the development of selective membranes for mixed proton-electron transport based on Carbon Nanotubes-TiO_2-Nafion nanocomposite. The collaboration was within the European FP7 project “Solhydromics”.

✓ January 2007 – June 2009

Since January 2007, S. Bianco worked as a Post Doc at the Physics Dept. of the Politecnico di Torino. His research activity was mainly devoted to growth (through Chemical Vapour Deposition technique) and characterization of carbon nanostructures for application in material science, electronics and biosensing. Under the guidance of Prof. A. Tagliaferro, S. Bianco was responsible for carbon nanotube growth, for studies of magnetic properties of carbon-encapsulated metallic nanoparticles, and for the fabrication of electrodes for electrochemical DNA detection. He developed innovative techniques for patterning of carbon nanotube carpets and he deeply studied the application of carbon nanotubes as fillers in composite materials. Moreover, in collaboration with the group of Prof. E. Tresso at the Politecnico di Torino, he investigated the integration of carbon nanotubes on electrodes for 3rd generation solar cells.

✓ January 2004 – December 2006

S. Bianco was a Ph.D. student at the Physics Dept. of the Politecnico di Torino, with a research activity based on the study of vibration properties of microcantilevers. In collaboration with Varian Inc. (Leinì (To), Italy) he developed a pressure sensor based on cantilever technology, with applications in the field of vacuum science. Moreover, cantilevers were studied as microbalances for applications in the field of biological sensing. Related to such topic, S. Bianco was the reference person for experimental characterizations in the FIRB project "LATEMAR".

✓ June 2003 - December 2003

S. Bianco was involved in a stage job at the research centre Telecom Italia Lab (Torino), under the supervision of Dr. F. Genova. The research activity, developed in collaboration with the University of Ferrara (Italy) under the supervision of Prof. G. Martinelli, was devoted to the study and characterizations of solid-state gas sensors based on semiconductor oxides for real-time monitoring of environmental pollutant.

✓ October 2002 - November 2002

During the M.Sc. thesis S. Bianco performed (as a part of the NATO project "Research of charge transport properties in SiC by nuclear microbeam techniques", awarded in the year 2000, and of the experiment “GAMMA-NEU”, 2001) a series of experiments for characterization of SiC-based radiation detectors at the Rudjer Boskovic Institute in Zagreb (Croatia), in a collaboration with the group of Dr. M. Jakšic, and at the Joint Research Centre in Ispra (Varese, Italy) in collaboration with Dr. Turkowskj. The devices were characterized from an electrical point of view and tested in Zagreb using ionic microbeams for the evaluation of the charge collection efficiency with the IBICC technique (with the estimation of the electron-hole pair generation energy) and in terms of radiation hardness. Moreover, the detection of neutrons using the SiC device with a ^{6}LiF neutron converter was tested at JRC.

S. Bianco is affiliated with the Center for Sustainable Future Technologies (CSFT@PoliTo) of the Italian Institute of Technology since July 2016.

S. Bianco supervised (for what concern the IIT activity) the subsequent Ph.D. thesis works:

- Federico Bella, Ph.D. in Electronic Devices at the “Scuola di Dottorato” of the Politecnico di Torino in 2015 (thesis title: “Photopolymers for Dye Sensitized Solar Cells”)
- Diego Pugliese, Ph.D. in Physics at the “Scuola di Dottorato” of the Politecnico di Torino in 2014 (thesis title: “New insights in Dye-sensitized Solar Cells: novel nanostructured photoanodes, metal-free dye, quasi-solid electrolytes and physics-based modeling”)
- Adriano Sacco, Ph.D. in Electronic Devices at the “Scuola di Dottorato” of the Politecnico di Torino in 2013 (thesis title: “Novel Dye-sensitized Solar Cell architecture based on microfluidic housing system”)
- Andrea Lamberti, Ph.D. in Electronic Devices at the “Scuola di Dottorato” of the Politecnico di Torino in 2013 (thesis title: “Metal-oxide nanostructures for energy applications”).

S. Bianco co-supervised the subsequent master thesis works:

- Matteo Villani, degree in Nanotechnologies for ICTs in 2017 (thesis title: “Electrical characterizations of sub-10 nm Graphene Nanoribbons for FET applications”)
- Pietro Zaccagnini, degree in Nanotechnologies for ICTs in 2017 (thesis title: “Supercapacitors for High Temperature Applications”)
- Elena Daniela Ozzello, degree in Material Engineering at the Politecnico di Torino in 2012 (thesis title: “Elettroliti polimerici fotoreticolati per Dye Sensitized Solar Cells”)
- Irene Berardone, degree in Physics Engineering at the Politecnico di Torino in 2012 (thesis title: “Realizzazione ed ottimizzazione di celle DSSC a base di ossidi nanostrutturati e coloranti organici innovativi”)
- Elisabetta Pireddu, degree in Physics Engineering at the Politecnico di Torino in 2011 (thesis title: “Caratterizzazione delle proprietà elettriche di nanocompositi a matrice elastomerica”)
- Daniele Flore, degree in Electronic Engineering at the Politecnico di Torino in 2011 (thesis title: “Celle solari dye sensitised: realizzazione di prototipi con design microfluidico per impiego di materiali nanostrutturati”)
- Pietro Ferrario, degree in Physics Engineering at the Politecnico di Torino in 2010 (thesis title: “Synthesis and characterization of poly-dimethylsiloxane/carbon nanotube composites”)
- Marco Bigatti, degree in Physics Engineering at the Politecnico di Torino in

2009 (thesis title: “Realizzazione e caratterizzazione di sistemi ibridi di ossido di titanio e nanotubi di carbonio per applicazioni fotovoltaiche”)

- Elisa Chiapusso, degree in Electronic Engineering at the Politecnico di Torino in 2006 (thesis title: “Progettazione e realizzazione di un setup sperimentale per lo studio delle caratteristiche di vibrazione di microcantilever”).

Moreover, S. Bianco supervised the activity of Prof. Khalid Pasha (NED University of Engineering & Technology, Karachi, Pakistan) during its Erasmus Mundus Action 2 (EXPERTS II project) period at Politecnico di Torino and the stage job of Davide Garetto at the Politecnico di Torino during his master's degree course in Micro and Nano Technologies (Politecnico di Torino, Ecole Polytechnique Fédérale de Lausanne, Grenoble INP).

Teaching experience (at the Politecnico di Torino):

- Academic year 2016/2017 – 2017/2018:
  Professor during the course “Fisica Generale I”.
- Academic year 2015/2016:
  lecturer during the course “Fisica Generale II".
- Academic years 2006/2007 - 2007/2008 - 2008/2009 – 2015/2016:
  lecturer during the course “Fisica Generale I".
- Academic years 2005/2006 - 2006/2007 - 2007/2008 - 2008/2009:
  lecturer during the course “Introduzione alla sperimentazione”.
- Academic year 2007/2008:
  S. Bianco taught a lesson about Carbon Nanotubes during the course “Proprietà termofisiche dei materiali”.
- Academic years 2008/2009 – 2010/2011:
  S. Bianco taught a lesson about Dye Sensitized Solar Cells during the III level course (ScuDo) “New concepts on solar energy conversion”.
- Academic year 2012-2013:
  S. Bianco supervised the lab activity about Dye Sensitized Solar Cells during the course “Introduction to nanotechnologies”.

S. Bianco has been involved in the preparation of two videos (1. Set-up for energy gap evaluation in semiconductors; 2. Simple fabrication of Dye-Sensitized Solar Cells) as a guide for student’s laboratory experiments.

During the year 2005 S. Bianco was involved in the organization of the exhibition “Superconduttori e Semiconduttori: la fisica quantistica si tocca con mano” at the Politecnico di Torino, concerning the experiments related to semiconductor characterizations and applications.

PUBLICATIONS

Total citations: 1469
***h* index**: 27
@ March 09th, 2018; source: scopus.com

Articles on ISI Journals:

1. S. Stassi, A. Lamberti, I. Roppolo, A. Casu, S. Bianco, D. Scaiola, A. Falqui, C. F. Pirri, C. Ricciardi:
   “*Evolution of nanomechanical properties and crystallinity of individual titanium dioxide nanotube resonators*”
   Nanotechnol. 29 (2018) 085702 1-8.
   DOI: 10.1088/1361-6528/aaa46c
2. G. Milano, S. Porro, M. Y. Ali, K. Bejtka, S. Bianco, F. Beccaria, A.

Chiolerio, C. F. Pirri, C. Ricciardi:
"*Unravelling Resistive Switching Mechanism in ZnO NW Arrays: The Role of the Polycrystalline Base Layer*"
J. Phys. Chem. C 122 (2017) 866-874.
DOI: 10.1021/acs.jpcc.7b09978

3. R. Bartali, A. Lamberti, S. Bianco, C. F. Pirri, M. Tripathi, G. Gottardi, G. Speranza, E. Iacob, N. Pugno, N. Laidani:
"*Graphene as Barrier to Prevent Volume Increment of Air Bubbles over Silicone Polymer in Aqueous Environment*"
Langmuir 33 (2017) 12865-12872.
DOI: 10.1021/acs.langmuir.7b02915

4. A Lamberti, M Serrapede, G Ferraro, M Fontana, F Perrucci, S Bianco, A Chiolerio, S Bocchini:
"*All-SPEEK flexible supercapacitor exploiting laser-induced graphenization*"
2D Mater. 4 (2017) 035012 1-10.
DOI: 10.1088/2053-1583/aa790e

5. A. Rafique, A. Massa, M. Fontana, S. Bianco, A. Chiodoni, C. F. Pirri, S. Hernández, A. Lamberti:
"*Highly Uniform Anodically Deposited Film of MnO_2 Nanoflakes on Carbon Fibers for Flexible and Wearable Fiber-Shaped Supercapacitors*"
ACS Appl. Mater. Interfaces 9 (2017) 28386-28393.
DOI: 10.1021/acsami.7b06311

6. R. Rani, S. Sharma, M. Quaglio, R. Rai, S. Bianco, D. Pugliese, C. F. Pirri:
"*A Novel Low Temperature Synthesis of KNN Nanoparticles by Facile Wet Chemical Method*"
Mater. Sci. Appl. 8 (2017) 247-257.
DOI: 10.4236/msa.2017.83017

7. A. Rafique, S. Bianco, M. Fontana, C. F. Pirri, A. Lamberti:
"*Flexible wire-based electrodes exploiting carbon/ZnO nanocomposite for wearable supercapacitors*"
Ionics 23 (2017) 1839-1847.
DOI: 10.1007/s11581-017-2003-3

8. A. Lamberti, F. Perrucci, M. Caprioli, M. Serrapede, M. Fontana, S. Bianco, S. Ferrero, E. Tresso:
"*New insights on laser-induced graphene electrodes for flexible supercapacitors: tunable morphology and physical properties*"
Nanotechnology 28 (2017) 174002 1-9.
DOI: 10.1088/1361-6528/aa6615

9. A. Scalia, F. Bella, A. Lamberti, S. Bianco, C. Gerbaldi, E. Tresso, C. F. Pirri:
"*A flexible and portable powerpack by solid-state supercapacitor and dye-sensitized solar cell integration*"
J. Power Sources 359 (2017) 311-321.
DOI: 10.1016/j.jpowsour.2017.05.072

10. G. Massaglia, A. Chiodoni, G. P. Salvador, L. Delmondo, J. A. Munoz-Tabares, S. Bocchini, A. Sacco, S. Bianco, G. Saracco, M. Quaglio:
"*Defining the role of nanonetting in the electrical behaviour of composite nanofiber/nets*"
RSC Adv. 7 (2017) 38812-38818.
DOI: 10.1039/c7ra05573k

11. A. Gigot, M. Fontana, M. Serrapede, M. Castellino, S. Bianco, M. Armandi, B. Bonelli, C. F. Pirri, E. Tresso, P. Rivolo:
"*Mixed 1T−2H Phase MoS_2/Reduced Graphene Oxide as Active Electrode for Enhanced Supercapacitive Performance*"
ACS Appl. Mater. Interfaces 8 (2016) 32842-32852.
DOI: 10.1021/acsami.6b11290

12. F. Bella, A. Lamberti, S. Bianco, E. Tresso, C. Gerbaldi, C. F. Pirri:
"*Floating, Flexible Polymeric Dye-Sensitized Solar-Cell Architecture: The Way of Near-Future Photovoltaics*"
Adv. Mater. Technol. 1 (2016) 1600002 1-9.
DOI: 10.1002/admt.201600002

13. M.-C. Clochard, G. Melilli, G. Rizza, B. Madon, M. Alves, J.-E. Wegrowe, M.-E. Toimil-Molares, M. Christian, L. Ortolani, R. Rizzoli, V. Morandi, V. Palermo, S. Bianco, C. F. Pirri, M. Sangermano:
"*Large area fabrication of self-standing nanoporous graphene-on-PMMA substrate*"
Mater. Lett. 184 (2016) 47-51.
DOI: 10.1016/j.matlet.2016.07.133

14. A. Lamberti, A. Gigot, S. Bianco, M. Fontana, M. Castellino, E. Tresso, C. F. Pirri:
"*Self-assembly of graphene aerogel on copper wire for wearable fiber-shaped supercapacitors*"
Carbon 105 (2016) 649-654.
DOI: 10.1016/j.carbon.2016.05.003

15. A. Lamberti, M. Fontana, S. Bianco, E. Tresso:
"*Flexible solid-state Cu_xO-based pseudo-supercapacitor by thermal oxidation of copper foils*"
Int. J. Hydrogen En. 41 (2016) 11700-11708.
DOI: 10.1016/j.ijhydene.2015.12.198

16. F. Clerici, M. Fontana, S. Bianco, M. Serrapede, F. Perrucci, S. Ferrero, E. Tresso, A. Lamberti:
"*In situ MoS_2 Decoration of Laser-Induced Graphene as Flexible Supercapacitor Electrodes*"
ACS Appl. Mater. Interfaces 8 (2016) 10459-10465.
DOI: 10.1021/acsami.6b00808

17. M. Laurenti, S. Bianco, M. Castellino, N. Garino, A. Virga, C. F. Pirri, P. Mandracci:
"*Toward Plastic Smart Windows: Optimization of Indium Tin Oxide Electrodes for the Synthesis of Electrochromic Devices on Polycarbonate Substrates*"
ACS Appl. Mater. Interfaces 8 (2016) 8032-8042.
DOI: 10.1021/acsami.6b00988

18. J. A. Muñoz-Tabares, K. Bejtka, A. Lamberti, N. Garino, S. Bianco, M. Quaglio, C. F. Pirri, A. Chiodoni:
"*Nanostructural evolution of one-dimensional $BaTiO_3$ structures by hydrothermal conversion of vertically aligned TiO_2 nanotubes*"
Nanoscale 8 (2016) 6866-6876.
DOI: 10.1039/c5nr07283b

19. M. Gerosa, A. Sacco, A. Scalia, F. Bella, A. Chiodoni, M. Quaglio, E. Tresso, S. Bianco:
"*Toward Totally Flexible Dye-Sensitized Solar Cells Based on Titanium Grids and Polymeric Electrolyte*"
IEEE J. Photovolt. 6 (2016) 498-505.
DOI: 10.1109/JPHOTOV.2016.2514702

20. A. Sacco, M. Gerosa, S. Bianco, L. Mercatelli, R. Fontana, L. Pezzati, M. Quaglio, C. F. Pirri, A. O. M. Tucci:
"*Dye-sensitized solar cell for a solar concentrator system*"
Sol. Energy 125 (2016) 307-313.
DOI: 10.1016/j.solener.2015.11.026

21. A. Sacco, F. Bella, S. De La Pierre, M. Castellino, S. Bianco, R. Bongiovanni, C. F. Pirri:
"Electrodes/Electrolyte Interfaces in the Presence of a Surface-Modified

Photopolymer Electrolyte: Application in Dye-Sensitized Solar Cells"
ChemPhysChem 16 (2015) 960-969.
DOI: 10.1002/cphc.201402891

22. A. Lamberti, A. Sacco, M. Laurenti, M. Fontana, C. F. Pirri, S. Bianco:
"*Sponge-like ZnO nanostructures by low temperature water vapor-oxidation method as dye-sensitized solar cell photoanodes*"
J. Alloy Compd. 615 (2015) S487-S490.
DOI: 10.1016/j.jallcom.2013.12.091

23. A. Sacco, D. Pugliese, A. Lamberti, M. Castellino, A. Chiodoni, A. Virga, S. Bianco:
"A long-term analysis of Pt counter electrodes for Dye-sensitized Solar Cells exploiting a microfluidic housing system"
Mater. Chem. Phys. 161 (2015) 74-83.
DOI: 10.1016/j.matchemphys.2015.05.013

24. A. Lamberti, A. Chiodoni, N. Shahzad, S. Bianco, M. Quaglio, C. F. Pirri:
"Ultrafast Room-Temperature Crystallization of TiO_2 Nanotubes Exploiting Water-Vapor Treatment"
Sci. Rep. 5 (2015) 7808 1-6.
DOI: 10.1038/srep07808

25. A. Sacco, M. S. Di Bella, M. Gerosa, A. Chiodoni, S. Bianco, M. Mosca, R. Macaluso, C. Calì, C. F. Pirri:
"Enhancement of photoconversion efficiency in dye-sensitized solar cells exploiting pulsed laser deposited niobium pentoxide blocking layers"
Thin Solid Films 574 (2015) 38-42.
DOI: 10.1016/j.tsf.2014.11.054

26. A. Lamberti, N. Garino, A. Sacco, S. Bianco, A. Chiodoni, C. Gerbaldi:
"As-grown vertically aligned amorphous TiO_2 nanotube arrays as high-rate Li-based micro-battery anodes with improved long-term performance"
Electrochim. Acta 151 (2015) 222-229.
DOI: 10.1016/j.electacta.2014.10.150

27. F. Bella, A. Lamberti, A. Sacco, S. Bianco, A. Chiodoni, R. Bongiovanni:
"Novel electrode and electrolyte membranes: Towards flexible dye-sensitized solar cell combining vertically aligned TiO_2 nanotube array and light-cured polymer network"
J. Membr. Sci. 470 (2014) 125-131.
DOI: 10.1016/j.memsci.2014.07.020

28. G. P. Salvador, D. Pugliese, F. Bella, A. Chiappone, A. Sacco, S. Bianco, M. Quaglio:
"New insights in long-term photovoltaic performance characterization of cellulose-based gel electrolytes for stable dye-sensitized solar cells"
Electrochim. Acta 146 (2014) 44-51.
DOI: 10.1016/j.electacta.2014.09.014

29. F. Bella, A. Sacco, D. Pugliese, M. Laurenti, S. Bianco:
"Additives and salts for dye-sensitized solar cells electrolytes: what is the best choice?"
J. Power Sources 364 (2014) 333-343.
DOI: 10.1016/j.jpowsour.2014.04.088

30. A. Sacco, S. Porro, A. Lamberti, M. Gerosa, M. Castellino, A. Chiodoni, S. Bianco:
"*Investigation of Transport and Recombination Properties in Graphene/Titanium Dioxide Nanocomposite for Dye-Sensitized Solar Cell Photoanodes*"
Electrochim. Acta 131 (2014) 154-159.
DOI: 10.1016/j.electacta.2013.11.105

31. S. Hernández, M. Tortello, A. Sacco, M. Quaglio, T. Meyer, S. Bianco, G. Saracco, C. F. Pirri, E. Tresso:

"*New Transparent Laser-Drilled Fluorine-doped Tin Oxide covered Quartz Electrodes for Photo-Electrochemical Water Splitting*"
Electrochim. Acta 131 (2014) 184-194.
DOI: 10.1016/j.electacta.2014.01.037

32. A. Tommasi, G. Coletta, D. Balma, S. L. Marasso, D. Perrone, G. Canavese, S. Stassi, S. Bianco, M. Cocuzza, C. F. Pirri:
"*Process optimisation of a MEMS based PZT actuated microswitch*"
Microelectron. Eng. 119 (2014) 137-140.
DOI: 10.1016/j.mee.2014.04.005

33. F. Bella, E. D. Ozzello, A. Sacco, S. Bianco, R. Bongiovanni:
"*Polymer electrolytes for dye-sensitized solar cells prepared by photopolymerization of PEG-based oligomers*"
Int. J. Hydrogen Energ. 39 (2014) 3036-3045.
DOI: 10.1016/j.ijhydene.2013.06.110

34. V. Cauda, D. Pugliese, N. Garino, A. Sacco, S. Bianco, F. Bella, A. Lamberti, C. Gerbaldi:
"*Multi-functional energy conversion and storage electrodes using flower-like Zinc oxide nanostructures*"
Energy 65 (2014) 639-646.
DOI: 10.1016/j.energy.2013.12.025

35. A. Lamberti, R. Gazia, A. Sacco, S. Bianco, M. Quaglio, A. Chiodoni, E. Tresso, C. F. Pirri:
"*Coral-shaped ZnO nanostructures for dye-sensitized solar cell photoanodes*"
Prog. Photovolt.: Res. Appl. 22 (2014) 189-197.
DOI: 10.1002/pip.2251

36. R. Gazia, G. Canavese, A. Chiodoni, A. Lamberti, S. Stassi, A. Sacco, S. Bianco, A. Virga, E. Tresso, C. F. Pirri:
"*Novel spongelike nanostructured ZnO films: properties and applications*"
J. Alloy Compd. 586 (2014) S331-S335.
DOI: 10.1016/j.jallcom.2013.01.149

37. A. Lamberti, N. Garino, K. Bejtka, S. Bianco, S. Stassi, A. Chiodoni, G. Canavese, C. F. Pirri, M. Quaglio:
"*Synthesis of ferroelectric $BaTiO_3$ tube-like arrays by hydrothermal conversion of a vertically aligned TiO_2 nanotube carpet*"
New J. Chem. 38 (2014) 2024-2030.
DOI: 10.1039/c3nj01138k

38. D. Pugliese, A. Lamberti, F. Bella, A. Sacco, S. Bianco, E. Tresso:
"TiO_2 nanotubes as flexible photoanode for back-illuminated dye-sensitized solar cells with hemi-squaraine organic dye and iodine-free transparent electrolyte"
Org. Electron. 15 (2014) 3715-3722.
DOI: 10.1016/j.orgel.2014.10.018

39. D. Pugliese, N. Shahzad, A. Sacco, G. Musso, A. Lamberti, G. Caputo, E. Tresso, S. Bianco, C. F. Pirri:
"*Fast TiO_2 sensitization using the semisquaric acid as anchoring group*"
Int. J. Photoenergy 2013 (2013) art. no. 871526.
DOI: 10.1155/2013/871526

40. D. Pugliese, F. Bella, V. Cauda, A. Lamberti, A. Sacco, E. Tresso, S. Bianco:
"*A chemometric approach for the sensitization procedure of ZnO flowerlike microstructures for dye-sensitized solar cells*"
ACS Appl. Mater. Interfaces 5 (2013) 11288-11295.
DOI: 10.1021/am403527m

41. N. Shahzad, F. Risplendi, D. Pugliese, S. Bianco, A. Sacco, A. Lamberti, R. Gazia, E. Tresso, G. Cicero:

"*Comparison of hemi-squaraine sensitized TiO_2 and ZnO photoanodes for DSSC applications*"
J. Phys. Chem. C 117 (2013) 22778-22783.
DOI: 10.1021/jp406824f

42. F. Bella, A. Sacco, G. P. Salvador, S. Bianco, E. Tresso, C. F. Pirri, R. Bongiovanni:
"*First pseudohalogen polymer electrolyte for dye-sensitized solar cells promising for in situ photopolymerization*"
J. Phys. Chem. C 117 (2013) 20421-20430.
DOI: 10.1021/jp405363x

43. A. Lamberti, A. Sacco, S. Bianco, D. Manfredi, M. Armandi, M. Quaglio, E. Tresso, C. F. Pirri:
"*An easy approach for the fabrication of TiO_2 nanotube-based transparent photoanodes for Dye-sensitized Solar Cells*"
Sol. Energy 95 (2013) 90-98.
DOI: 10.1016/j.solener.2013.06.004

44. N. Shahzad, D. Pugliese, A. Lamberti, A. Sacco, A. Virga, R. Gazia, S. Bianco, M. I. Shahzad, E. Tresso, C. F. Pirri:
"*Monitoring the dye impregnation time of nanostructured photoanodes for dye sensitized solar cells*"
J. Phys.: Conf. Series 439 (2013) 012012 1-12.
DOI: 10.1088/1742-6596/439/1/012012

45. F. Bella, E. D. Ozzello, S. Bianco, R. Bongiovanni:
"*Photo-polymerization of acrylic/methacrylic gel–polymer electrolyte membranes for dye-sensitized solar cells*"
Chem. Eng. J. 225 (2013) 873-879.
DOI: 10.1016/j.cej.2013.04.057

46. A. Lamberti, N. Garino, A. Sacco, S. Bianco, D. Manfredi, C. Gerbaldi:
"*Vertically aligned TiO_2 nanotube array for high rate Li-based micro-battery anodes with improved durability*"
Electrochim. Acta 102 (2013) 233-239.
DOI: 10.1016/j.electacta.2013.04.014

47. G. Cicero, G. Musso, A. Lamberti, B. Camino, S. Bianco, D. Pugliese, F. Risplendi, A. Sacco, N. Shahzad, A. M. Ferrari, B. Ballarin, C. Barolo, E. Tresso, G. Caputo:
"*Combined experimental and theoretical investigation of the hemi-squaraine/TiO_2 interface for dye sensitized solar cells*"
Phys. Chem. Chem. Phys. 15 (2013) 7198-7203.
DOI: 10.1039/c3cp50559f

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Bianco Stefano

Curriculum Vitae

Book chapters:

1. A. Sacco, A. Lamberti, S. Bianco, E. Tresso:
   "Anodically Grown TiO_2 Nanotube Membranes: Synthesis, Characterization, and Application in Dye-Sensitized Solar Cells"
   Book Chapter in "Handbook of Nanoelectrochemistry", Springer International Publishing (Switzerland), DOI: 10.1007/978-3-319-15207-3_9-1, in press (2015)
2. S. Bianco, A. Chiodoni, J. R. Nair, C. Gerbaldi, M. Quaglio:
   "*Nanostructures for Energy*"
   Book chapter in "Encyclopedia of Nanotechnology", Editor B. Bhushan, Springer Verlag GmbH (Heildelberg, Germany), ISBN 978-90-481-9751-4 (2015).
3. A. Sacco, F. Bella, S. Bianco, R. Bongiovanni:
   "*Photocured Polymer Electrolyte Membranes for Dye-Sensitized Solar Cells*"
   Book chapter in "Photovoltaics: Synthesis, Applications and Emerging Technologies", Editor M. A. Gill, Nova Science Publishers, Inc. (Hauppauge NY, USA), ISBN 978-1-63117-844-3 (2014).
4. S. Bianco, A. Chiodoni, C. Gerbaldi, M. Quaglio:
   "*Nanostructures for Energy*"
   Book chapter in "Encyclopedia of Nanotechnology", Editor B. Bhushan, Springer Verlag GmbH (Heildelberg, Germany), ISBN 978-90-481-9751-4 (2012).
5. R. Gazia, A. Chiodoni, E. Celasco, S. Bianco, P. Mandracci:
   "*X-Ray Analysis on Ceramic Materials Deposited by Sputtering and Reactive Sputtering for Sensing Applications*"
   Book chapter in "X-Ray Spectroscopy", Editor S. K. Sharma, Intech Open Access Publisher (Croatia), ISBN 978-953-307-967-7 (2011).
6. A. Chiolerio, M. Castellino, P. Jagdale, M. Giorcelli, S. Bianco, A. Tagliaferro:
   "*Electrical Properties of CNT-Based Polymeric Matrix NanoComposites*"
   Book chapter in "Carbon Nanotubes - Polymer Nanocomposites", Editor S. Yellampalli, Intech Open Access Publisher (Croatia), ISBN 978-953-307-498-6 (2011).
7. S. Bianco, P. Ferrario, M. Quaglio, R. Castagna, C. F. Pirri:
   "*Nanocomposites Based on Elastomeric Matrix Filled with Carbon Nanotubes for Biological Applications*"
   Book chapter in "Carbon Nanotubes - From Research to Applications", Editor S. Bianco, Intech Open Access Publisher (Croatia), ISBN 978-953-307-500-6 (2011).
8. S. Musso, S. Bianco, M. Giorcelli, M. Castellino, G. Digregorio, A. Tagliaferro:
   "*Growth, properties and application of thick self-standing MWCNT blocks*"
   Book chapter in "Carbon Based Nanomaterials", Materials Science Foundations (monograph series) Vols. 65-66, Editors N. Alì, A. Oechsner and W. Ahmed, Trans Tech Publications (TTP) Inc. (Switzerland), ISBN / ISBN-13: 0-87849-155-4 / 978-0-87849-155-1 (2010).
9. S. Bianco, M. Giorcelli, S. Musso, A. Tagliaferro:
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   Book chapter in "Carbon Nanotubes: Multifunctional Materials", Editors M. Umeno and P.R. Somani, Applied Science Innovations Pvt. Ltd. (India), ISBN/ISSN: 978-81-906027-0-9 (2009).

Patent:

1. C. F. Pirri, M. Quaglio, S. Bianco, M. Cocuzza, A. Tagliaferro:

"Dispositivi microfluidici per applicazione in campo biomedicale, fabbricati in materiale polimerico composito"
National patent TO2010A000196, March 2010.

Peer review:

S. Bianco is member of the Advisory Panel of the journal Nanotechnology (IOP, impact factor 3.44).
S. Bianco is referee for many International Journals from Elsevier, Wiley and IOP.

Book Editor:

S. Bianco edited the book "Carbon Nanotubes - From Research to Applications", ISBN 978-953-307-500-6, published by Intech Open Access Publisher (Croatia) in July 2011.

CONTRIBUTIONS TO CONFERENCES AND SEMINARS

- Invited oral presentation: "NIS Colloquia - Dye sensitised solar cells: from materials to devices", Torino (Italy), January 2013.
- Invited oral presentation: "Towards Global Artificial Photosynthesis" conference, Lord Howe Island (Australia), August 2011.
- Invited oral presentation: "International Conference on Carbon Nanotechnology: Potential and Challenges", Kanpur (India), December 2010.
- Oral presentation: "FUTURMAT 2: Second International Meeting on Organic Materials for a better future", 2012, Brindisi, Italia.
- Two oral presentations: "IUMRS-ICA 2008" conference, Nagoya (Japan), December 2008 (winner of the best presentation award in Symposium R: "Carbon Nanotubes: Synthesis, Characterization and Application").
- Poster presentations: "ISEECap15", Montpellier (France), June 2015; "E-MRS ICAM IUMRS 2011 Spring Meeting", Nice (France), May 2011; "Advanced school on hybrid nanostructured materials for photovoltaic applications", Valencia (Spain), March 2009; "Diamond 2007" (18th European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes, and Nitrides), Berlin (Germany), September 2007; "AVS 53rd International Symposium & Exhibition", San Francisco (USA), November 2006.

S. Bianco is co-author of more than 50 works that have been presented (as oral or poster presentation) on international conferences and meetings.

PERSONAL SKILLS

Mother tongue

✓ Italian

Other languages

✓ English (IELTS certification, 2005 – CEFR C1):
- Reading skills: very good
- Writing skills: very good
- Oral skills: very good

✓ French:
- Reading skills: very good
- Writing skills: very good
- Oral skills: very good

Bianco Stefano

Curriculum Vitae

Working and organizing skills

During the Ph.D. studies and post-doc years, S. Bianco learned to face and solve problems with a rigorous scientific approach. Furthermore, having frequent and diffused collaborations with international research groups, he developed collaborative and communicative skills needed to work effectively in a multicultural and multidisciplinary environment. He was also involved in writing some national and international research projects.

Main technical skills

- Characterization techniques for semiconductors and electronic devices: electron microscopy, electrical characterizations, optical characterizations, nuclear microprobe characterization.
- Growth techniques for thin film deposition (sputtering, thermal evaporation) and morphological/structural characterization (XRD, micro-Raman); standard processes for silicon microtechnology.
- Development and characterization of new sensing system for biological analysis.
- Growth and characterization of nanostructured metal oxides and carbon-based materials.
- Technologies and characterization methods for Photovoltaics.
- Technologies and characterization methods for Supercapacitors.

Main hobbies

- Music (indie rock expert).
- Football, running, bike.
- 10 years of voluntary work in the Italian Red Cross.

Autorizzo il trattamento dei dati personali in conformità al D.Lgs. 196/2003.

Torino, October, 2016 Stefano Bianco