

## CURRICULUM VITAE et STUDIORUM

NAME Marina Serantoni  
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NAZIONALITY Italian

### QUALIFICATIONS

- 2019 **Degree in Viticulture and Oenology**, Department of Agro-Food Sciences and Technologies (DISTAL), University of Bologna, Cesena Campus, grade 110/110 L, with qualification for the profession of Oenologist.
- Thesis title: "Study of an alternative material to bentonite for the protein stabilization of wine". The study involved the development of a thin ceramic mesoporous layer supported on an inert material and the analysis of the variation of wines protein and metal content after contact with the same (heat test, SDS page, UV-VIS, ICP).
- 2001 **PhD**, in semiconductor electrochemistry 1997-2001, Department of Chemistry and Environmental Sciences, University of Limerick, Ireland, (MIUR declaration of equivalence, 11/27/2009 Prot. 2615)
- Thesis title: "An Electrochemical Study of Anisotropic Etching of Monocrystalline Silicon in Alkaline Solution". The etching of silicon in an alkaline environment was studied by impedance spectroscopy (EIS), cyclic voltammetry (CV) and scanning probe microscopy (AFM)); the thesis was funded by a European research project (FUPUSET) involving three universities: Liverpool, Utrecht and St. Andrews and two industries: Siemens (Berlin, DE) and Druck (Leicester, UK). The aim of the project was the development of corrosion techniques of silicon wafers for positioning of optical fibers.
- 1995 **Degree in Physical-Chemistry**, "Giacomo Ciamician" Department of Chemistry, University of Bologna
- Thesis title: "Electrochemistry and spectroscopy of mononuclear polypyridine complexes of rhenium and heterometallic polynuclear of ruthenium and rhenium". The supramolecular complexes of Re and Ru were analyzed in an electrochemical cell in anhydrous environment, at low temperatures and pressures, using cyclic voltammetry and UV-NIR spectro-electrochemistry in situ. The aim of the thesis was the physico-chemical characterization of the complexes, usable as harvesting material in third generation solar cells (DSSC).
- 1978 **Scientific High School**, Liceo Scientifico "F. Severi", Faenza
- 1973 **Secondary School License**, "A.Oriani" State Secondary School, Casola Valsenio, RA

### POST-GRADUATE COURSES

- 2004 XPS data analysis (X-ray Photoelectrons Spectroscopy), Materials and Surface Science Institute (MSSI), University of Limerick, Ireland
- 2004 Raman Spectroscopy, MSSI, University of Limerick
- 2003 FIB-SIMS (Focused Ion Beam-Secondary Ion Mass Spectrometry), MSSI, University of Limerick
- 2001 Ellipsometry, L.O.T. Oriel, University of Limerick
- 1999 Surface Probe Microscopy, ThermoMicroscope, University of Limerick
- 1998 The Practical Application of Surface Analysis for Materials investigations, NMRC, Cork, Ireland
- 1998 Theory and Practise of Electrochemical Impedance Spectroscopy (EIS) Course, University of Bath, UK
- 1995 Surface Chemistry in Ceramic Processing, ECerS, Agenzia Polo Ceramico, Faenza

### OTHER COURSES

|      |   |
|------|---|
| 2019 | Introductory course on medicinal plants and essential oils, Albrigi in Herba, Giardino delle Erbe, Casola Valsenio RA   |
| 2018 | Budgeting and reporting of European projects, Prodos Academy European funds & projects, Rome  |
| 2018 | Basic training course for the sensory evaluation of food and non-food products: theoretical, practical, methodological aspects, DISTAL, University of Bologna |
| 2017 | Sensory recognition of wine defects, Vinidea S.r.L., Ponte dell'Olio (PC)   |
| 2016 | ICV methodology of sensory analysis of grapes: applied methodology module, Groupe ICV, Vinidea S.r.L., Ponte dell'Olio (PC)                                   |
| 1974 | Three-year musical orientation course, with final exam, Ministry of Education, Municipality of Casola Valsenio, Didactic Direction Riolo Terme, RA            |
| 1973 | Scheidegger Typing Course, European Organization for Commercial Professional Preparation, Casola Valsenio, RA   |

#### SAFETY COURSES

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| 2021 | General training ATECO sector 207 M 72 - Type of risk B; Prevention and protection unit, CNR Italy   |
| 2019 | Specific training for workers and new hires in the field of safety - High risk, Sestante Romagna S.r.L.  |
| 2018 | Course for electrical workers under voltage in LV and out of voltage and in proximity to MV and HV with PES (certified expert person), Besant Strategic Partner, Ravenna |
| 2018 | Specific training for the sectors of the low-risk class, Global BEM S.r.L, Mazzo di Tho (MI)   |
| 2015 | Training course for personnel assigned to the use and handling of technical gases, SOL S.p.A., Bologna   |

#### PROFESSIONAL EXPERIENCES

14/04/2020-up to date

**Senior Research Fellow** (Bando-073.21.03.02- CNR-ISTEC; National Council of Research, Institute for Science and Technology for Ceramic, Faenza, Italy)

##### **Project Manager H2020 EU ASINA project**

- administrative and financial management
- organisation and management of the ASINA server platform
- organisation of project meetings
- support to the technical and scientific management of the project
- scientific support to the planning and collection of chemical-physical and functional performances of nanomaterials

##### **Role in the Nanotechnology and Nanosafety group of CNR-ISTEC**

- administrative management of financial resources
- support to the preparation and presentation of European research projects
- carrying out electrochemical measurements for project reports
- scientific, administrative, and financial management of the European project Susfood2-Core Organic MI WINE

01/01/2019 - 02/04/2020

##### **Project Manager R&D, Tozzi Green S.p.A., Mezzano RA (Italy)**

Manager for the Tozzi Green research project "NuFid" on the enhancement of the by-products of the Sicilian prickly pear in collaboration with the University of Florence (Department of Neurofarba), the University of Catania (Di3A) and the University of Cesena (DISTAL). Technical-scientific and administrative reporting of the project

Manager for the research project "VANCOFI" ("Agrifood" PON I&C 2014-2020) on the enhancement of Sicilian prickly pear by-products

Co-responsible for a research project for the selection of varieties of amaranth and development of the cultivation technique, in collaboration with the University of Florence, DISPAA

Coordinator of a post-graduate internship on "Distillation of essential oils, gas chromatographic analysis with mass spectrometry detector (GC-MSD) and spray dry encapsulation in polymeric matrices"

Starter of the transformation path of the R&D section (with chemical-physical laboratory) of Tozzi Green into an Incubator / Accelerator of start-up

Recommissioning of the field emission scanning electron microscope (FESEM)

01/12/2015 – 31/12/2018

**Test engineer / Document controller**, Tozzi Green S.p.A., Mezzano RA (Italia)

Team member for the realization of Peru Ministerial rural electrification project for the installation of 200k Solar Home System in 3 years: document controller, interaction with purchasing and supplier's office, logistics, supplier audit management, quality control of shipments, non-compliances management; Electrochemical testing of energy storage devices

15/06/2013–30/11/2015

**Materials Manager**, Tozzi Green S.p.A., Joint Lab CNR-Nanotec - Tozzi green, Lecce, IT, PONR&C Project MAAT\_Molecular Nanotechnologies for Human Health and Environment

Realization of a 17x12 cm<sup>2</sup> photovoltaic prototypes: semitransparent smart panels of modulable colour in which energy production (DSSC solar cells), lighting (OLEDs) and controlled shielding (photovoltaic) functions are combined

Management of the efficiency and effectiveness of the technical and experimental choices according to the optimization of the production process and transparency requirements, colour intensity variation, speed of response and energy balances (ISO standards):

- Selection of materials and instruments
- Electrolyte formulation liquid ionic based for electrochromic applications
- Electric and spectro-electrochemical analysis of electrochromic thin films and prototype devices (UV-VIS-NIR 175-3300 nm with integrating sphere)

Technical, scientific, and administrative project reporting

Patents analysis

01/04/2011–14/06/2013

**Manager of electrochemical research section**, Daunia Solar Cell S.r.l, Forlì FC (Tozzi Green S.p.A. subsidiary company); Project MOSAIC (MISE Industria 2015)

- Formulation of electrolytes for DSSC with the aim of making the device suitable for IEC 61646 stability tests
- Construction of standard procedures for electrochemical measurements on DSSC: current-potential curves (IV) and EIS with data analysis by simulation software
- Stability and compliance tests according to IEC 61646
- Scientific project reporting

22/12/2010 - 31/03/2011

**Research fellow** ISTEC research program "Study and realization of transparent ceramic materials ", theme "Study and realization of prototypes for the demonstration of technological feasibility of transparent ceramic components"

Prot. N. 0001018 22/12/2010

- Optimization of spray drying granulation and crystallographic studies of Yb: YAG for transparent ceramic materials

21/12/2009 - 20/12/2010

**Research fellow** ISTEC research program: "Electrochemical systems for energy storage", theme "Production and characterization of ceramic electrochemical systems for storage and energy production"

Prot. N. 0000787 21/12/2009

- SEM characterizations of  $\beta$ -alumina for ZEBRA (Zeolite Battery Research Africa Project) cells
- Design and production of DSSC prototypes

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| 15/09/2009 - 14/12/2009 | <p><b>Research fellow</b> ISTEC project "Synthesis and production of ceramic products for electrical, electronic and energy applications" and "New and promising active agents doped with ytterbium for tunable lasers in the near infrared"</p> <p>Prot. N. 0000398 13/08/2009</p> <ul style="list-style-type: none"> <li>• Synthesis and characterization of nano/micro dispersed ceramic systems: nanoparticles of <math>Y_2O_3</math> and <math>YbY_2O_3</math> for laser materials</li> <li>• Optimisation of thin mesoporous layers of <math>TiO_2</math> for DSSC</li> </ul>   |
| 15/09/2008 - 14/09/2009 | <p><b>Research fellow</b> ISTEC project " "Synthesis and production of ceramic products for electrical, electronic and energy applications", theme "New and promising active ytterbium-doped active media for tunable lasers in the near infrared: feasibility study of transparent ceramic materials for laser sources"</p> <p>Prot. N. 0000406 12/09/2008</p> <ul style="list-style-type: none"> <li>• Chemical synthesis of nanoparticles of <math>Y_2O_3</math> and <math>YbY_2O_3</math> microwave in polyols and aqueous solvents</li> </ul>  |
| a.s. 2007-2008          | <p><b>Teacher in Mathematic and Science and support teacher</b> in Lower Secondary School (IC Riolo Terme)</p> <p><b>Teacher in Chemistry</b> in Upper Secondary School (ITCG "G. Compagnoni", Lugo)</p>  |
| a.s. 2006-2007          | <p><b>Teacher in Food Science</b> (IPSSAR "P. Artusi", Riolo Terme)</p> <p><b>Teacher in Chemistry</b> (Ist. Ballardini e Ist. Oriani, Faenza), Upper Secondary Schools</p>   |
| March 2001- Oct. 2006   | <p><b>Research Fellow (post-doc)</b> Materials and Surface Science Institute (MSSI), University of Limerick, IE</p> <p>Responsible of Atomic force microscope (AFM) (three-dimensional mapping of surfaces with nanometric definition), Ellipsometer (optical characterizations of thin layers of organic and inorganic materials), and Raman spectroscopy (compositional characterizations of ceramic materials and carbon compounds)</p> <p>Teaching in training courses for PhD students on the same instruments</p> <p>Analysis of material surfaces in collaboration with university research groups and for industries: the analysed materials included electrodeposited thin layers and metal PVD; polymeric surfaces, carbon fibre surfaces, glass, mesoporous silicates in thin films, powders, enzymes, and proteins deposited on surfaces</p> <p>Editing of scientific publications, drafting of analysis reports.</p> |
| Sept. 1997 - Febr. 2001 | <p><b>Research Assistant - PhD student</b> EU project FUPUSET Chemical and Environmental Science Dept., University di Limerick, IE</p>  |
| Dic. 1996 - July 1997   | <p><b>Research Assistant</b> EU project CHRX-CT94-0574, ENSCI, Limoges, FR</p> <p>Study of surfactants to modify the surface properties of powders for ceramic materials and improve the stability of aqueous suspension of <math>Al_2O_3</math> (Z-potential and rheology with temperature); editing of scientific publications</p>  |
| Jan. 1996 -July 1996    | <p><b>Research Assistant</b> EU project CHRX-CT94-0574, University di Erlangen-Nürnberg, DE</p> <p>Study on hydrophobic interactions in colloidal suspensions of AlN ceramic powders (SEM, FTIR, sedimentation); drafting of final project report</p>   |
| June1995- Oct. 1995     | <p><b>Staff member</b> IVth EcerS Conference, Agenzia Polo Ceramico, Faenza</p> <p>Reorganization and corrections of publications draft, creation of indexes by subject and keywords for congress proceedings, relationships, and correspondence with the speakers</p>  |

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| April 1995 - May 1995  | <b>Attending graduate Electrochemistry lab</b> , Dept. of Chemistry "G. Ciamician", University of Bologna, and IRTEC, CNR, Faenza<br><br>Introduction to the properties of ceramic materials and colloidal suspensions  |
| <b>ACADEMIC<br/>TEACHING</b>   |   |
| AY 2003 - 2004<br>Autumn semester                                    | <b>Junior Lecturer</b> "Physical Chemistry 4" module CH4005 (Electrochemistry), 3rd. year B.Sc. in Industrial Chemistry, College of Science, University of Limerick   |
| AY 1999 - 2000<br>Autumn semester                                    | <b>Teaching assistant</b> "Physical Chemistry 4" module CH4005 (Electrochemistry), 3rd. year B.Sc. in Industrial Chemistry, College of Science, University of Limerick  |
| AY 1999 – 2000<br>Spring semester                                    | <b>Teaching assistant</b> "Physical Chemistry 3" module CH4004, 2nd year B.Sc. in Industrial Chemistry, College of Science, University of Limerick  |
| AY1998 - 1999<br>Autumn semester                                     | <b>Teaching assistant</b> "Physical Chemistry 4" module CH4005 (Electrochemistry), 3rd. year B.Sc. in Industrial Chemistry, College of Science, University of Limerick  |
| <b>WORK<br/>EXPERIENCES<br/>PRECEDING THE<br/>DEGREE</b>             |   |
| 30/09/1986 - 30/11/1991  | Spa care assistant, spa seasons, Terme di Riolo Bagni, Riolo Terme, RA  |
| 1984 - 1987  | Agricultural worker, farms in Riolo Terme, RA   |
| 01/08/1983 - 14/11/1983  | Administrative assistant U.S.L N. 37, Faenza, Economic and procurement service  |
| 02/08/1982 - 02/11/1982  | Administrative assistant U.S.L. N.37 Faenza, Staff management service   |
| 23/11/1981 - 04/03/1983  | Music teacher in a "Music training cycle", Primary Schools, Riolo Terme, RA   |
| <b>RECENT<br/>PARTICIPATIONS<br/>AT CONFERENCES<br/>OR WORKSHOPS</b> |   |
| 9-11 September 2019  | 50th ISEO, International symposium on essential oil, Wien, Austria<br><br>Auditor   |
| 27 - 28 June 2019  | International Workshop on Supercapacitors and Energy Storage, Bologna<br><br>Auditor  |
| 24 June 2019   | Workshop: The role of batteries in the energy transition. The challenges for the research and innovation system in Italy and in Europe, Auditorium Enel, Roma<br><br>Auditor  |
| 26-30 May 2014   | E-MRS Spring meeting, Lille, France<br><br>Poster presentation: "Glass frit-sealed electrochromic devices with screen-printed WO <sub>3</sub> layer", F. Martina, C. Baldisserri, M. Serantoni, TRE Tozzi Renewable Energy  |
| 16 – 18 October 2014   | Photovoltaics: new frontiers and applications, Castello Carlo V°, Lecce<br><br>Poster presentation: "12x17 cm <sup>2</sup> glass-frit sealed smart window prototype integrating DSSC and Electrochromic screen-printed sections", M. Serantoni, C. Baldisserri, F. Martina, G. Gorni, TRE Tozzi Renewable Energy, Mezzano RA; TRE-IIT Joint Lab, Arnesano, LE           |
| 11-12 October 2012   | The Italian Photochemistry Meeting, Dipartimento di Chimica "Giacomo Ciamician" Università di Bologna<br><br>Poster presentation: "Towards industrialization of Dye-Sensitized Solar Cells, Improvement in long-term stability", M. Serantoni, I. Zama, C. Martelli, A. Antonini, M. Liberatori, F. Martina, V. Borzatta, G. Gorni, F. Matteucci, Daunia Solar Cell R&D |
| 28 June – 1° July 2012   | ECHEMS 8th Molecular surface science and catalysis, Bertinoro, Italy  |

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| 14 September 2011       | Oral presentation: "Towards industrialization of Dye-Sensitized Solar Cells, Improvement in long-term stability", M. Serantoni, Daunia Solar Cell R&D   |
|                         | Workshop: "Electrochemistry for a Sustainable Energy Future", Ravenna   |
|                         | Oral presentation: "Dye-Sensitized Solar Cell. An overview", M. Serantoni, Daunia Solar Cell R&D  |
| 15 - 18 May 2011        | 3rd HOPV Hybrid and Organic Photovoltaics Conference, Valencia, Spain   |
|                         | Auditor   |
| 6-8 December 2010       | 6th Laser Ceramics Symposium, International Symposium on Transparent Ceramics for Photonics Applications, Munster, Germany  |
|                         | Oral presentation: "Improvement in the processing of Yb:YAG ceramic materials", M. Serantoni, L. Esposito, A. Piancastelli, D. Alderighi, A. Pirri, ISTEC CNR Faenza, IFAC-CNR Firenze                          |
| 28-30 April 2010        | PRE'10 Workshop, Florence   |
|                         | Oral presentation: "Characterization of Yb:YAG ceramic as laser media", D. Alderighi, A. Pirri, G. Toci, M. Vannini, L. Esposito, A.L. Costa, M. Serantoni, A. Piancastelli, IFAC-CNR Firenze, ISTEC CNR Faenza |
|                         | Poster presentation: "Different approaches for the fabrication of transparent Yb:YAG ceramics", M. Serantoni, A.L. Costa, L. Esposito, A. Piancastelli  |
| 9-11 December 2009      | 5th Laser Ceramic Symposium: International Symposium on Transparent Ceramics for Photonics Applications, Bilbao, Spain  |
|                         | Oral presentation: "Experimental features affecting the transparency of YAG Materials", L. Esposito, A. Piancastelli, M. Serantoni, A.L. Costa, ISTEC CNR Faenza  |
| 31 March - 3 April 2009 | Nanotech2009.it, Nanotechnology, Competitiveness & Innovation for industrial growth, Roma   |
|                         | Poster presentation: "Microwave-assisted synthesis of nanometric Y <sub>2</sub> O <sub>3</sub> particles for laser source application", M. Serantoni, A.L. Costa, E. Mercadelli, A. Sanson, ISTEC CNR Faenza    |

## LANGUAGES

NATIVE Italian

## OTHER LANGUAGES

|         | UNDERSTANDING |         | SPEAKING           |                   | WRITING |
|---------|---------------|---------|--------------------|-------------------|---------|
|         | Listening     | Reading | Spoken interaction | Spoken production |         |
| ENGLISH | C2            | C2      | C2                 | C2                | C1      |
| FRENCH  | C2            | C2      | C2                 | C2                | B2      |

## MEMBERSHIP

International Society of Electrochemistry Member (ISE) since 2000  
 Associazione ASSOENOLOGI Member since 2019

## LIST OF PUBLICATIONS AND PATENTS

- 1) Martina, F., Pugliese, M., Serantoni, M., Baldisserri, C., Gorni, G., Maggiore, A., Gigli, G., Maiorano, V.  
[Large area self-powered semitransparent trifunctional device combining photovoltaic energy production, lighting and dynamic shading control](#)  
(2017) Solar Energy Materials and Solar Cells, 160, pp. 435-443.
- 2) Grisorio, R., De Marco, L., Baldisserri, C., Martina, F., Serantoni, M., Gigli, G., Suranna, G.P.  
[Sustainability of organic dye-sensitized solar cells: The role of chemical synthesis](#)  
(2015) ACS Sustainable Chemistry and Engineering, 3 (4), pp. 770-777.
- 3) Serantoni, M., Costa, A.L., Zanelli, C., Esposito, L.  
[Crystallization behaviour of Yb-doped and undoped YAG nanoceramics synthesized by microwave-assisted urea precipitation](#)  
(2014) Ceramics International, 40 (8 PART A), pp. 11837-11844.
- 4) Esposito, L., Epicier, T., Serantoni, M., Piancastelli, A., Alderighi, D., Pirri, A., Toci, G., Vannini, M., Anghel, S., Boulon, G.  
[Integrated analysis of non-linear loss mechanisms in Yb: YAG ceramics for laser applications](#)  
(2012) Journal of the European Ceramic Society, 32 (10), pp. 2273-2281.
- 5) Serantoni, M., Piancastelli, A., Costa, A.L., Esposito, L.  
[Improvements in the production of Yb:YAG transparent ceramic materials: Spray drying optimisation](#)  
(2012) Optical Materials, 34 (6), pp. 995-1001.
- 6) Esposito, L., Piancastelli, A., Costa, A.L., Serantoni, M., Toci, G., Vannini, M.  
[Experimental features affecting the transparency of YAG ceramics](#)  
(2011) Optical Materials, 33 (3), pp. 713-721.
- 7) Costa, A.L., Serantoni, M., Blosi, M., Mercadelli, E., Esposito, L., Piancastelli, A., Sanson, A.  
[Microwave assisted synthesis of Yb:Y2O3 based materials for laser source application](#)  
(2010) Advanced Engineering Materials, 12 (3), pp. 205-209.
- 8) Serantoni, M., Mercadelli, E., Costa, A.L., Blosi, M., Esposito, L., Sanson, A.  
[Microwave-assisted polyol synthesis of sub-micrometer Y2O3 and Yb-Y2O3 particles for laser source application](#)  
(2010) Ceramics International, 36 (1), pp. 103-106.
- 9) Alderighi, D., Pirri, A., Toci, G., Vannini, M., Esposito, L., Costa, A.L., Piancastelli, A., Serantoni, M.  
[Characterization of Yb:YAG ceramics as laser media](#)  
(2010) Optical Materials, 33 (2), pp. 205-210.
- 10) Parlak, E.A., Sarac, A.S., Serantoni, M., Bobacka, J.  
[Electropolymerization of N-Hydroxyethylcarbazole on carbon fiber microelectrodes](#)  
(2009) Journal of Applied Polymer Science, 113 (1), pp. 136-142.
- 11) Sarac, A.S., Gencturk, A., Schulz, B., Gilsing, H.-D., Serantoni, M.  
[Nanoscale surface morphology and monomer concentration dependence on impedance of electrocoated 2,2-dimethyl-3,4-propylene-dioxythiophene on carbon fiber microelectrode](#)  
(2007) Journal of Nanoscience and Nanotechnology, 7 (10), pp. 3543-3552.
- 12) Sarac, A.S., Geyik, H., Parlak, E.A., Serantoni, M.  
[Electrochemical composite formation of thiophene and N-methylpyrrole polymers on carbon fiber microelectrodes: Morphology, characterization by surface spectroscopy, and electrochemical impedance spectroscopy](#)  
(2007) Progress in Organic Coatings, 59 (1), pp. 28-36.
- 13) Zynek, M., Serantoni, M., Beloshapkin, S., Dempsey, E., McCormac, T.

Electrochemical and surface properties of multilayer films based on a Ru<sup>2+</sup> metallodendrimer and the mixed addenda Dawson heteropolyanion

(2007) *Electroanalysis*, 19 (6), pp. 681-689.

- 14) O'Dwyer, C., Buckley, D.N., Sutton, D., Serantoni, M., Newcomb, S.B.  
[An Investigation by AFM and TEM of the Mechanism of Anodic Formation of Nanoporosity in n-InP in KOH](#)  
(2007) *Journal of the Electrochemical Society*, 154 (2), pp. H78-H85.
- 15) Vignali, M., Edwards, R.A.H., Serantoni, M., Cunnane, V.J.  
[Electropolymerized polythiophene layer extracted from the interface between two immiscible electrolyte solutions: Current-time analysis](#)  
(2006) *Journal of Electroanalytical Chemistry*, 591 (1), pp. 59-68.
- 16) Sarac, A.S., Serantoni, M., Tofail, S.A.M., Cunnane, V.J.  
[Nanoscale characterization of carbazole-Indole Copolymers Modified Carbon Fiber Surfaces](#)  
(2005) *Journal of Nanoscience and Nanotechnology*, 5 (10), pp. 1677-1682.
- 17) Sarac, A.S., Serantoni, M., Tofail, S.A.M., Henry, J., Cunnane, V., McMonagle, J.B.  
[Characterisation of nanosize thin films of electrografted N-vinylcarbazole copolymers \(P\[NVCz-co-VBSA\] and P\[NVCz-co-3-MeTh\]\) onto carbon fibre: AFM, XPS, and Raman spectroscopy](#)  
(2005) *Applied Surface Science*, 243 (1-4), pp. 183-198.
- 18) Serantoni, M., Sarac, A.S., Sutton, D.  
[FIB-SIMS investigation of carbazole-based polymer and copolymers electrocoated onto carbon fibers, and an AFM morphological study](#)  
(2005) *Surface and Coatings Technology*, 194 (1), pp. 36-41.
- 19) Turner, K., Serantoni, M., Boyce, A., Walsh, G.  
[The use of proteases to remove protein-based residues from solid surfaces](#)  
(2005) *Process Biochemistry*, 40 (10), pp. 3377-3382.
- 20) Rahman, I.Z., Razeed, K.M., Kamruzzaman, M., Serantoni, M.  
[Characterisation of electrodeposited nickel nanowires using NCA template](#)  
(2004) *Journal of Materials Processing Technology*, 153-154 (1-3), pp. 811-815.
- 21) Sarac, A.S., Serantoni, M., Tofail, S.A.M., Cunnane, V.J.  
[Morphological and spectroscopic analyses of poly\[N-vinylcarbazole-co- vinylbenzenesulfonic acid\] copolymer electrografted on carbon fiber: The effect of current density](#)  
(2004) *Applied Surface Science*, 229 (1-4), pp. 13-18.
- 22) Sarac, A.S., Tofail, S.A.M., Serantoni, M., Cunnane, V.J.  
[Spectroscopic and topographic characterization of the effect of monomer feed ratio in electrocopolymerization of N-vinylcarbazole-co-3-methylthiophene on carbon fiber](#)  
(2004) *Journal of Materials Science*, 39 (8), pp. 2945-2950.
- 23) Sarac, A.S., Evans, U., Serantoni, M., Clohessy, J., Cunnane, V.J.  
[Electrochemical and morphological study of the effect of polymerization conditions on poly\(terthiophene\)](#)  
(2004) *Surface and Coatings Technology*, 182 (1), pp. 7-13.
- 24) Chowdhury, S., Laugier, M.T., Rahman, I.Z., Serantoni, M.  
[Nanoindentation combined with scanning force microscope for characterization of mechanical properties of carbon nitride thin films](#)  
(2004) *Surface and Coatings Technology*, 177-178, pp. 537-544.
- 25) Sarac, A.S., Tofail, S.A.M., Serantoni, M., Henry, J., Cunnane, V.J., McMonagle, J.B.



Surface characterisation of electrografted random poly[carbazole-co-3-methylthiophene] copolymers on carbon fiber: XPS, AFM and Raman spectroscopy

(2004) Applied Surface Science, 222 (1-4), pp. 148-165.

- 26) Deere, J., Serantoni, M., Edler, K.J., Hodnett, B.K., Wall, J.G., Magner, E.  
[Measurement of the Adsorption of Cytochrome c onto the External Surface of a Thin-Film Mesoporous Silicate by Ellipsometry](#)  
(2004) Langmuir, 20 (2), pp. 532-536.
- 27) O'Dwyer, C., Buckley, D.N., Serantoni, M., Sutton, D., Newcomb, S.B.  
[Pitting and porous layer formation on n-InP anodes](#)  
(2003) Proceedings - Electrochemical Society, 11, pp. 136-151.
- 28) Buckley, D.N., O'Dwyer, C., Melly, T., Serantoni, M., Sutton, D., Newcomb, S.B.  
[A study of anodic films on N-type inP by spectroscopic ellipsometry and atomic force microscopy](#)  
(2003) Proceedings - Electrochemical Society, 25, pp. 103-115.
- 29) Sarac, A.S., Evans, U., Serantoni, M., Cunnane, V.J.  
[Electrochemical and morphological study of the effect of polymerization conditions on poly\(tetrathioephene\) with emphasis on carbon fiber microelectrodes: A cyclic voltammetry and atomic force microscopy study](#)  
(2003) Carbon, 41 (14), pp. 2725-2730.
- 30) Serantoni, M., Cunnane, V.J.  
[Time dependence study of the anisotropic etching of silicon by electrochemical impedance spectroscopy and atomic force microscopy](#)  
(2003) Journal of Electroanalytical Chemistry, 548 (SUPPL.), pp. 49-67.
- 31) Redington, W., Redington, M., Hampshire, S., Serantoni, M.  
[Properties of some high Al content glasses in various lanthanide-Si-Al-O-N systems](#)  
(2003) Journal of Non-Crystalline Solids, 316 (1), pp. 74-81.
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PATENT: WO2019/202480

Title: A device for stabilizing wine and other vegetable beverages and the related stabilizing methods

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