Productivity of N. Serpone in last 5 years (2018–January 2023)

Nick Serpone, University of Pavia**,** Italy **;** **https://research.com/u/nick-serpone**

D-Index & Metrics

Discipline name	D-index	Citations	Publications	World Ranking	National Ranking
Chemistry	97	37,996	398	561	14

See also: https://www.adscientificindex.com/scientist.php?id=1810311

Books

1. ***AGRITECH: Innovative Agriculture Using Microwaves and Plasmas: Thermal and Non-Thermal Processing,*** S. Horikoshi, G. Brodie, K. Takaki, **N. Serpone** (Eds.), Springer, Singapore (**2022**).
2. ***RF Power Semiconductor Generator in Heating and Energy Utilization,*** S. Horikoshi & **N. Serpone**, Eds., Springer, Japan (**2020**).
3. ***Le Microonde – tra scienze chimiche e scienze gastronomiche*.** **Nick Serpone,** Stefano Protti, and Satoshi Horikoshi, Kemia, Aracne Editrice spa, Roma, Italia (**2018**).
4. ***Microwave chemical and materials processing: A tutorial***, S. Horikoshi, R. F. Schiffmann, J. Fukushima, & **N. Serpone**, Springer, Singapore (**2018**).

Chapters

- 41. Satoshi Horikoshi and **Nick Serpone**, Novel Ingenious and High-Quality Utilization of Microwave High Energy in Chemical Reactions: Heterogeneous Microscopic Heating, Promoted Electron Transfer by Electromagnetic Wave Energy, and Generation of In-Liquid Plasma. In *High-Energy Chemistry and Processing in Liquids*, Y. Ishikawa et al. (eds.), Chapter 13, Springer Nature, Singapore Pte Ltd. **2022**; https://doi.org/10.1007/978-981-16-7798-4_13
- 40. Horikoshi S., **Serpone N**. (**2022**) Microwave Thermal and Nonthermal Processes. In: Horikoshi S., Brodie G., Takaki K., **Serpone N**. (eds) ***Agritech: Innovative Agriculture Using Microwaves and Plasmas***. Springer, Singapore. https://doi.org/10.1007/978-981-16-3891-6_1
- 39. Horikoshi S., Suzuki N., **Serpone N**. (**2022**) Improvement and Effective Growth of Plants' Environmental Stress Tolerance on Exposure to Microwave Electromagnetic Wave Effects. In: Horikoshi S., Brodie G., Takaki K., **Serpone N**. (Eds) ***Agritech: Innovative Agriculture Using Microwaves and Plasmas***. Springer, Singapore. https://doi.org/10.1007/978-981-16-3891-6_5
- 38. Horikoshi S., **Serpone N**. (**2022**) Stimulating the Aging of Beef with Microwaves. In: Horikoshi S., Brodie G., Takaki K., **Serpone N**. (eds) ***Agritech: Innovative Agriculture Using Microwaves and Plasmas*.** Springer, Singapore. https://doi.org/10.1007/978-981-16-3891-6_7
- 37. Emeline A.V., Rudakova A.V., Mikhaylov R.V., Ryabchuk V.K., **Serpone N**. Electron transfer processes in heterostructured photocatalysts, in: Bahnemann D., Patrocinio A.O.T. (Eds) Springer ***Handbook of Inorganic Photochemistry***, Springer Nature, Switzerland, **2022**, pp. 73-104; https://doi.org/10.1007/978-3-030-63713-2

- 36. Stephan Holtrup, Satoshi Horikoshi and **Nick Serpone,** Radio Frequency (RF) Discharge Lamps, in S. Horikoshi and **N. Serpone**, Eds., ***RF Power Semiconductor Generator Application in Heating and Energy Utilization***, Springer Nature, Singapore. (**2020**).
- 35. **Nick Serpone**, Rita Terzian, Darren Lawless, Anne-Marie Pelletier, Claudio Minero, Ezio Pelizzetti, Photocatalyzed Destruction of Water Contaminants: Mineralization of Aquatic Creosote Phenolics and Creosote by Irradiated Particulates of the White Paint Pigment Titania, in ***Aquatic and Surface Photochemistry***, George R. Helz (Ed.), CRC Press ebook, Boca Raton, FL, January **2018**, Chapter 25; https://doi.org/10.1201/9781351069847
- 34. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Microwave as a Heat Source, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 1-17, Springer, Singapore (**2018**).
- 33. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Engineering of Microwave Heating, in ***Microwave Chemical and Materials Processing – A tutorial,*** pp. 145-182, Springer, Singapore (**2018**).
- 32. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Physics of Microwave Heating, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 87-143, Springer, Singapore (**2018**).
- 31. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Microwave Chemistry in Liquid Media, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 183-212, Springer, Singapore (**2018**).
- 30. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Electromagnetic Fields and Electromagnetic Waves, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 33-45, Springer, Singapore (**2018**).
- 29. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Microwave Heating, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 47-85, Springer, Singapore (**2018**).
- 28. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Materials Processing by Microwave Heating, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 321-381, Springer, Singapore (**2018**).
- 27. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, The Nature of Heat, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 19-32, Springer, Singapore (**2018**).
- 26. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Microwave-Assisted Chemistry, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 243-319, Springer, Singapore (**2018**).
- 25. S. Horikoshi, R.F. Schiffmann, J. Fukushima, and **N. Serpone**, Microwave Materials Processing in Solid Media, in ***Microwave Chemical and Materials Processing – A tutorial***, pp. 213-241, Springer, Singapore (**2018**).

Articles

2023

- R507. Giuseppe Sportelli, Tommaso Boselli, Stefano Protti, **Nick Serpone**, Davide Ravelli, Photovoltaic Materials as Heterogeneous Photocatalysts: A golden opportunity for sustainable organic syntheses, *Solar RRL*, in press (**2023**); https://doi.org/10.1002/solr.202201008

2022

- F506. Satoshi Horikoshi, Yuhei Arai, Haruka Mura, and **Nick Serpone**, Curing an epoxy adhesive with fixed frequency microwaves in the presence of a microwave absorber (activated carbon) and by the variable frequency microwave method, *Journal of Applied Polymer Sciences*, 139, e53010 (**2022**). https://doi.org/10.1002/app.53010
- F505. S Horikoshi, M Iwabuchi, M Kawaguchi, S Yasumasu, **N Serpone**, Uptake of nanoparticles from sunscreen physical filters into cells arising from increased environmental microwave radiation: increased potential risk of the use of sunscreens to human health, *Photochemical & Photobiological Sciences*, 21, 1819-1831.(**2022**); https://doi:10.1007/s43630-022-00259-3 .

- F504. S Horikoshi, H Tanizawa, A Sawai, **N Serpone**, Low-temperature microwave-driven thermochemical generation of hydrogen from steam reforming of alcohols over magnetite, *International Journal of Hydrogen Energy* 47 (56), 23520-23529 (**2022**). https://doi.org/10.1016/j.ijhydene.2022.05.172
- R503. DS Shtarev, **N Serpone**, A new generation of visible-light-active photocatalysts – the alkaline earth metal bismuthates: syntheses, compositions, structures, and properties, *Journal of Photochemistry and Photobiology C: Photochemistry Reviews*, 50, 100501 (**2022**). https://doi.org/10.1016/j.jphotochemrev.2022.100501
- F502. A.V. Emeline, A.V. Rudakova, V.K. Ryabchuk, **N. Serpone**, Recent advances in composite and heterostructured photoactive materials for the photochemical conversion of solar energy, *Current Opinion in Green and Sustainable Chemistry*, 34, 100588 (**2022**). https://doi.org/10.1016/j.cogsc.2021.100588
- F501. Satoshi Horikoshi, Mizuki Kimura, and **Nick Serpone**, Development of a Microwave-Discharge Light-Emitting Diode (MDLED): A novel UV source for the UV-driven microwave-assisted TiO_2 photocatalytic treatment of contaminated wastewaters, *Photochemical & Photobiological Sciences* **21**, 659–665 (**2022**); https://doi.org/10.1007/s43630-021-00118-7 (special issue to honor prof. Angelo Albini).

2021

- F500. Satoshi Horikoshi, Reo Takahashi, Kirara Sueishi, Honoka Tanizawa, and **Nick Serpone**, Microwave-driven hydrogen production (MDHP) from water and activated carbons (ACs). Application to wastewaters and seawater, *RSC Adv*., 11 (2021) 31590-31600; https://www.DOI:10.1039/d1ra05977g
- F499. Satoshi Horikoshi, Seiya Sawada and **Nick Serpone**, A novel green chemistry gelation method for polyvinyl pyrrolidone (PVP) and dimethylpolysiloxane (silicone): microwave-induced in-liquid-plasma, *RSC Adv.*, 11 (2021) 24326-24335; https://doi.org/10.1039/D1RA03007H
- F498. D.S. Shtarev, A.V. Shtareva, R. Kevorkyants, M.S. Molokeev, & N. Serpone, (2021). Revisiting the $BaBiO_3$ semiconductor photocatalyst: synthesis, characterization, electronic structure, and photocatalytic activity. *Photochemical & Photobiological Sciences*, 20(9), 1147–1160. https://doi:10.1007/s43630-021-00086-y (special issue to honor prof. Angelo Albini)
- F497. Vyacheslav N. Kuznetsov, Nadezhda I. Glazkova, Ruslan V. Mikhaylov, Ibrahim M. Sharaf, Vladimir K. Ryabchuk, Alexei V. Emeline, and **Nick Serpone**, Separation and Recombination of Photocarriers from Color Centers and Optically Silent Trap States in the Halide Double $Cs_2AgBiBr_6$ Photochromic Perovskite from 100 to 450 K, *ACS Appl. Mater. Interfaces*, 13 (2021) 25513–25522**.** https://doi.org/10.1021/acsami.1c03721
- F496. Daisuke Sakemi, **Nick Serpone**, Satoshi Horikoshi, Search for the Microwave Nonthermal Effect in Microwave Chemistry: Synthesis of the Heptyl Butanoate Ester with Microwave Selective Heating of a Sulfonated Activated Carbon Catalyst, *Catalysts*, 11 (2021) 466.
- F495. Satoshi Horikoshi, Yuhei Arai, **Nick Serpone**, In Search of the Driving Factor for the Microwave Curing of Epoxy Adhesives and for the Protection of the Base Substrate against Thermal Damage, *Molecules*, 26 (2021) 2240.
- R494. Kenta Hagiwara, Satoshi Horikoshi, **Nick Serpone**, Photoluminescent Carbon Quantum Dots: Synthetic Approaches and Photophysical Properties, *Chem. Europ. J*., 27 (2021) 9466-9481 (Review article for Special issue for Balzani's 85th birthday). https://doi.org/10.1002/chem.202100823
- F493. Satoshi Horikoshi, Kenta Hagiwara, and **Nick Serpone,** Luminescent Monodispersed Carbon Quantum Dots Destined for Bioimaging Applications, *J. Photochem. Photobiol. A:Chem.*, 415 (2021) 113310; https://doi.org/10.1016/j.jphotochem.2021.113310
- F492. Satoshi Horikoshi, Satoshi Yamazaki, Yuhei Arai, Daisuke Sakemi, Masahiro Yoshizawa-Fujita, and **Nick Serpone,** On the Synthesis of Magnetic Ionic Liquids and Related Recyclable Magnetized Cellulose Nanofibers for Practical Applications in Separation Science, *J. Oleo Sci*., 70 (2021) 737-743. https://www.doi:10.5650/jos.ess21087
- F491. Upile Chitete-Mawenda, Nick Serpone, and Satoshi Horikoshi, Development of a Hg-free UV light source incorporating a Kr/Br_2 gas, and its application for wastewater treatments, *Photochem.*

Photobiol. Sci., 20 (2021) 101-111. https://doi.org/10.1007/s43630-020-00006-6

- R490. **Nick Serpone**, SUNSCREENS and their usefulness: Have we made any progress in the last two decades?, *Photochem. Photobiol. Sci*., 20 (2021) pp. 189-244. https://doi:10.1007/s43630-021-00013-1

2020

- F489. Dmitry S. Shtarev, Anna V. Shtareva, Nikita I. Selivanov, Vladimir K. Ryabchuk, Aida V. Rudakova, and **Nick Serpone**, Optical Properties of Various Strontium Bismuthates: Luminescence and UV-induced Photocoloration, *ChemPhotoChem*. 4 (2020) 5209-5222; https://doi.org/10.1002/cptc.202000128
- F488. Satoshi Horikoshi, Yuuhei Arai, Iftikhar Ahmad, Clayton DeCamillis, Keith Hicks, Bob Schauer and **Nick Serpone**, Application of Variable Frequency Microwaves in Microwave-Assisted Chemistry: Relevance and Suppression of Arc Discharges on Conductive Catalysts, *Catalysts*, 10 (2020) 777; http://doi:10.3390/catal10070777
- F487. D.S. Shtarev, V.K. Ryabchuk, A.V. Rudakova, A.V. Shtareva, M.S. Molokeev, E.A. Kirichenko, and **N. Serpone**, Phenomenological Rule from Correlations of Conduction/Valence Band Energies and Bandgap Energies in Semiconductor Photocatalysts: Calcium Bismuthates versus Strontium Bismuthates, *ChemCatChem*, 12 (2020) 1551-1555. https://doi.org/10.1002/cctc.201902236
- F486. D.S. Shtarev, A.V. Shtareva, R. Kevorkyants, A.V. Rudakova, M.S. Molokeev, T.V. Bakiev, K. M. Bulanin, V.K. Ryabchuk, and **N. Serpone**, Materials Synthesis, Characterization and DFT Calculations of the Visible-Light-Active Perovskite-like Barium Bismuthate $Ba_{1.264(4)}Bi_{1.971(4)}O_4$ Photocatalyst**,** *J. Mater. Chem. C*, 8 (2020) 3509-3519. http://www.DOI:10.1039/c9tc06457e
- F485. Satoshi Horikoshi, Seiya Sawada, Akihiro Tsuchida, and **Nick Serpone** Enhanced Degradation of Organic Pollutants with Microwave-induced Liquid-in-plasma (MLP): Case of Flame Retardant Tetrabromobisphenol-A in Alkaline Aqueous Media, *J. Oleo Sci*., 69 (2020) 261-269; https://www.doi:10.5650/jos.ess19333
- F484. Ruslan Khabibrakhmanov, Anna Shurukhina, Aida Rudakova, Dmitrii Barinov, Vladimir Ryabchuk, Alexei Emeline, Galina Kataeva, and **Nick Serpone**, UV-induced formation of defects in cubic ZrO_2. Optical demonstration of Y, Yb and Er dopants' interactions with photocarriers, *Chem. Phys. Letters*, 742 (2020) 137136.
- F483. **Nick Serpone**, Two Decades of Ezio Pelizzetti's Achievements and Contributions to Photocatalysis – A personal recollection**,** *Catal. Today*, 340 (2020) 1–6; https://doi.org/10. 1016/j.cattod.2018.10.063
- F482. Dmitry Shtarev, A.V. Shtareva, V. K. Ryabchuk, Aida V. Rudakova, P.D. Murzin, Maxim Molokeev, A.V. Koroleva, A.I. Blokh, and **Nick Serpone**, Solid-State Synthesis, Characterization, UV-Induced Coloration and Photocatalytic Activity – The $Sr_6Bi_2O_{11}$, $Sr_3Bi_2O_6$ and $Sr_2Bi_2O_5$ Bismuthates, *Catal. Today*, 340 (2020) 70–85**;** https://doi.org/10.1016/j.cattod.2018.09.035
- F481. Satoshi Horikoshi and **Nick Serpone,** Can the photocatalyst TiO_2 be incorporated into a wastewater treatment method? Background and prospects, *Catal. Today*, 340 (2020) 334–346; https://doi.org/10.1016/j.cattod.2018.10.020
- F480. Vyacheslav N. Kuznetsov, Nadezhda I. Glazkova, Ruslan V. Mikhaylov, Anna V. Kozhevina and **Nick Serpone**, Photophysics of color centers in visible-light-active rutile titania. Evi-dence of the photoformation and trapping of charge carriers from advanced diffuse reflectance spectro-scopy and mass spectrometry, *Catal. Today*, 340 (2020) 58–69; https://www.doi.org/10.1016/j.cattod. 2018.09.022

2019

- F479. Minh Quang Tran, Kazuya Nakata, **Nick Serpone**, and Satoshi Horikoshi, Microwave-/UV-assisted Enhancement of the Wettability of Photoactive TiO_2 Substrates Coated on an Inactive Ti/i-TiO_2 Base, *J. Oleo Sci*., 68 (2019) 967-975; https://doi:10.5650/jos.ess19115
- F478. Dmitry S. Shtarev, Anna V. Shtareva, Vladimir K. Ryabchuk, Aida V. Rudakova, and **Nick Serpone**, Considerations of Trends in Heterogeneous Photocatalysis. Correlations between Conduction and Valence Band Energies with Bandgap Energies of Various Photocatalysts, *ChemCatChem*., 11 (2019) 3534–3541; https://www.dx.doi.org/10.1002/cctc.201900439

- F477. V.N. Kuznetsov, N.I. Glazkova, R.V. Mikhaylov, A.A. Murashkina, and **N. Serpone**, Advanced diffuse reflectance spectroscopy for studies of photochromic/photoactive solids, *J. Phys.: Condens. Matter*, 31 (2019) 424001 (14 pp); https://www.iopscience.iop.org/article/10.1088/1361-648X/ab2bab
- F476. Satoshi Horikoshi, Kota Nakamura, Mikio Yashiro, Kanae Kadomatsu, and **Nick Serpone**, Microwave electromagnetic field effect(s) in chemistry and biology. II[†]. Probing the microwaves' electromagnetic-field effects in *in vivo* and *in vitro* enzymatic reactions, *Sci. Rep.*, 9 (2019) 8945; https://www.doi.org/10.1038/s41598-019-45152-9
- F475. Satoshi Horikoshi, Seiya Sawada, Susumu Sato, and **Nick Serpone**, Microwave-driven in-liquid plasma in chemical and environmental applications.[†] III. Optimized pulsed-microwave conditions for continuous generation of in-liquid plasma and application to a dye-contaminated wastewater, *Plasma Chem. Plasma Proces*sing, 39 (2019) 51-62.
- F474. Satoshi Horikoshi, Daisuke Yamamoto, Kenta Hagiwara, Akihiro Tsuchida, Isamu Matsumoto, Yoshinari Nishiura, Yousuke Kiyoshima, and **Nick Serpone**, Development of a Hg-free UV light source and its performance in photolytic and photocatalytic applications, *Photochem. Photobiol. Sci.*, 18 (2019) 328-335.
- F473. S. Horikoshi and **N. Serpone**, Microwave Flow Chemistry as a Methodology in Organic Syntheses, Enzymatic Reactions, and Nanoparticle Syntheses, *Chem. Rec.*, 19 (2019) 118-139; https://www.doi:10.1002/tcr.201800062

2018

- F472. **Nick Serpone,** Heterogeneous Photocatalysis and Prospects of TiO_2-Based Photocatalytic DeNOxing the Atmospheric Environment, *Catalysts*, 8 (2018) 553 (99 pages); https://www.doi.org/10.3390/catal8110553
- F471. Akihiro Tsuchida, Takeshi Shimamura, Seiya Sawada, Susumu Sato, **Nick Serpone,** and Satoshi Horikoshi, In-liquid Plasma. A stable light source for advanced oxidation processes in environmental remediation, *Rad. Phys. Chem.*, 147 (2018) 53–58.
- F470. Satoshi Horikoshi, Tomoki Watanabe, Atsushi Narita, Yumiko Suzuki, and **Nick Serpone**, The electromagnetic wave energy effect(s) in microwave–assisted organic syntheses (MAOS), *Sci. Rep.*, 8 (2018) 5151*;* https://www.doi:10.1038/s41598-018-23465-5
- F469. Leonid Shaitanov, Anna Murashkina, Aida Rudakova, Vladimir Ryabchuk, Alexei Emeline, Yurii Artemev, Galina Kataeva, and **Nick Serpone**, UV-induced formation of color centers in dispersed TiO_2 particles. Effect of thermal treatment, metal (*Al*) doping, and adsorption of molecules, *J. Photochem. Photobiol. A: Chem.*, 354 (2018) 33–46; https://www.doi.org/10.1016/j.jphotochem.2017.07.038
- F468. V.N. Kuznetsov, N. I. Glazkova, R. V. Mikhaylov, and **N. Serpone**, Additional Specific Channel of Photoactivation of Solid Semiconductors. A revisit of the thermo-/photo-stimulated bleaching of photoinduced Ti^{3+} color centers in visible-light-active photochromic rutile titania, *J. Phys. Chem. C*, 122 (2018) 13294–13303 (Kamat Fesstschrifte); http://www.10.1021/acs.jpcc.7b08998