

# Silvia Caponi

## List of Publications by Year in descending order

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Version: 2024-02-01

84  
papers

1,693  
citations

279798

23  
h-index

315739

38  
g-index

84  
all docs

84  
docs citations

84  
times ranked

1393  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Non-contact elastography methods in mechanobiology: a point of view. <i>European Biophysics Journal</i> , 2022, 51, 99-104.  | 2.2  | 13        |
| 2  | Brillouin-Raman microspectroscopy for the morpho-mechanical imaging of human lamellar bone. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210642.                              | 3.4  | 8         |
| 3  | Nanoengineering for Mechanobiology –N4M-20–. <i>European Biophysics Journal</i> , 2022, 51, 97-98.   | 2.2  | 2         |
| 4  | Disentanglement of Multiple Scattering Contribution in Brillouin Microscopy. <i>ACS Photonics</i> , 2022, 9, 2087-2091.  | 6.6  | 9         |
| 5  | Fast MoS <sub>2</sub> thickness identification by transmission imaging. <i>Applied Nanoscience (Switzerland)</i> , 2021, 11, 605-610.  | 3.1  | 7         |
| 6  | Bio-mechanical characterization of a CAD/CAM PMMA resin for digital removable prostheses. <i>Dental Materials</i> , 2021, 37, e118-e130.   | 3.5  | 31        |
| 7  | Predicting the Refractive Index of Tissue Models Using Light Scattering Spectroscopy. <i>Applied Spectroscopy</i> , 2021, 75, 574-580.   | 2.2  | 4         |
| 8  | Covalent Immobilization of Proteases on Polylactic Acid for Proteins Hydrolysis and Waste Biomass Protein Content Valorization. <i>Catalysts</i> , 2021, 11, 167.                            | 3.5  | 11        |
| 9  | Bioinspired Reactive Interfaces Based on Layered Double Hydroxides-Zn Rich Hydroxyapatite with Antibacterial Activity. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 1361-1373. | 5.2  | 15        |
| 10 | Multimodal imaging for mechanical and chemical mapping at the microscale: applications on single cells and tissues. , 2021, , .  |      | 0         |
| 11 | Transition across a sharp interface: Data from Raman and Brillouin imaging spectroscopy. <i>Data in Brief</i> , 2020, 33, 106368.  | 1.0  | 2         |
| 12 | Relevant Length Scales in Brillouin Imaging of Biomaterials: The Interplay between Phonons Propagation and Light Focalization. <i>ACS Photonics</i> , 2020, 7, 2319-2328.                    | 6.6  | 25        |
| 13 | Viscoelastic properties of biopolymer hydrogels determined by Brillouin spectroscopy: A probe of tissue micromechanics. <i>Science Advances</i> , 2020, 6, .                                 | 10.3 | 61        |
| 14 | Mechano-chemistry of human femoral diaphysis revealed by correlative Brillouin-Raman microspectroscopy. <i>Scientific Reports</i> , 2020, 10, 17341.   | 3.3  | 13        |
| 15 | Correlative Brillouin and Raman spectroscopy data acquired on single cells. <i>Data in Brief</i> , 2020, 29, 105223.   | 1.0  | 7         |
| 16 | On the actual spatial resolution of Brillouin Imaging. <i>Optics Letters</i> , 2020, 45, 1063.   | 3.3  | 35        |
| 17 | All-optical correlative micro-spectroscopies in the investigation of stromal collagen morpho-mechanics. , 2020, , .  |      | 0         |
| 18 | Label-free investigation of human collagen morpho-mechanics by correlative SHG, Brillouin and Raman microscopy. , 2020, , .  |      | 0         |

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|----|--|------|-----------|
| 19 | Corneal collagen morpho-mechanics characterized by correlative optical microscopies. , 2020, , .   |      | 0         |
| 20 | Meso-Raman approach for rapid yeast cells identification. Biophysical Chemistry, 2019, 254, 106249.  | 2.8  | 5         |
| 21 | Morpho-mechanics of human collagen superstructures revealed by all-optical correlative micro-spectroscopies. Communications Biology, 2019, 2, 117.   | 4.4  | 49        |
| 22 | Characterization Tools for Mechanical Probing of Biomimetic Materials. , 2019, , 69-111.   |      | 2         |
| 23 | Brillouin-Raman mapping of natural fibers with spectral moment analysis. Biomedical Optics Express, 2019, 10, 1469.  | 2.9  | 19        |
| 24 | Micro-Raman detection of the differentiation state of SH-SY5Y cells grown on silicon and aluminium substrates. Journal of Raman Spectroscopy, 2018, 49, 1031-1040.   | 2.5  | 2         |
| 25 | Non-contact mechanical and chemical analysis of single living cells by microspectroscopic techniques. Light: Science and Applications, 2018, 7, 17139-17139.   | 16.6 | 91        |
| 26 | High charge density silica micro-electrets fabricated by electron beam. Smart Materials and Structures, 2018, 27, 075052.  | 3.5  | 6         |
| 27 | Primary cortical neurons on PMCS TiO 2 films towards bio-hybrid memristive device: A morpho-functional study. Biophysical Chemistry, 2017, 229, 115-122.   | 2.8  | 9         |
| 28 | High-Performance Versatile Setup for Simultaneous Brillouin-Raman Microspectroscopy. Physical Review X, 2017, 7, .   | 8.9  | 44        |
| 29 | Viscoelasticity of amyloid plaques in transgenic mouse brain studied by Brillouin microspectroscopy and correlative Raman analysis. Journal of Innovative Optical Health Sciences, 2017, 10, 1742001.                                | 1.0  | 74        |
| 30 | High-contrast Brillouin and Raman micro-spectroscopy for simultaneous mechanical and chemical investigation of microbial biofilms. Biophysical Chemistry, 2017, 229, 123-129.  | 2.8  | 27        |
| 31 | Extracellular vesicles released by fibroblasts undergoing H-Ras induced senescence show changes in lipid profile. PLoS ONE, 2017, 12, e0188840.  | 2.5  | 52        |
| 32 | A multidisciplinary approach to study the functional properties of neuron-like cell models constituting a living bio-hybrid system: SH-SY5Y cells adhering to PANI substrate. AIP Advances, 2016, 6, .                               | 1.3  | 9         |
| 33 | Preparation of Extracellular Matrix Protein Fibers for Brillouin Spectroscopy. Journal of Visualized Experiments, 2016, , .  | 0.3  | 14        |
| 34 | Raman micro-spectroscopy study of living SH-SY5Y cells adhering on different substrates. Biophysical Chemistry, 2016, 208, 48-53.  | 2.8  | 10        |
| 35 | Cryopreservation of cells: FT-IR monitoring of lipid membrane at freeze-thaw cycles. Biophysical Chemistry, 2016, 208, 34-39.  | 2.8  | 15        |
| 36 | Bio-hybrid interfaces to study neuromorphic functionalities: New multidisciplinary evidences of cell viability on poly(anyline) (PANI), a semiconductor polymer with memristive properties. Biophysical Chemistry, 2016, 208, 40-47. | 2.8  | 23        |

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|----|---|-----|-----------|
| 37 | Infrared <i>versus</i> light scattering techniques to monitor the gel to liquid crystal phase transition in lipid membranes. <i>Journal of Raman Spectroscopy</i> , 2015, 46, 644-651.          | 2.5 | 40        |
| 38 | Hydration and aggregation of lysozyme by extended frequency range depolarized light scattering. <i>Journal of Non-Crystalline Solids</i> , 2015, 407, 472-477.                                  | 3.1 | 18        |
| 39 | Stress effects on the elastic properties of amorphous polymeric materials. <i>Journal of Chemical Physics</i> , 2014, 141, 214901.  | 3.0 | 16        |
| 40 | Biomechanics of fibrous proteins of the extracellular matrix studied by Brillouin scattering. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140739.                               | 3.4 | 72        |
| 41 | Raman micro-spectroscopy: A powerful tool for the monitoring of dynamic supramolecular changes in living cells. <i>Biophysical Chemistry</i> , 2013, 182, 58-63.                                | 2.8 | 27        |
| 42 | The Action of Ligands in the Aggregation Process of Soft Colloidal Solution Monitored by Raman Spectroscopy. <i>Food Biophysics</i> , 2013, 8, 203-208.   | 3.0 | 0         |
| 43 | Stress-Induced Modification of the Boson Peak Scaling Behavior. <i>Journal of Physical Chemistry B</i> , 2013, 117, 14477-14485.  | 2.6 | 14        |
| 44 | Cluster Phases of Decorated Micellar Solutions with Macrocyclic Ligands. <i>Journal of Physical Chemistry B</i> , 2013, 117, 3613-3623.   | 2.6 | 1         |
| 45 | Networking Properties of Cyclodextrin-Based Cross-Linked Polymers Probed by Inelastic Light-Scattering Experiments. <i>Journal of Physical Chemistry B</i> , 2012, 116, 5323-5327.              | 2.6 | 58        |
| 46 | Different routes to the glass transition: A comparison between chemical and physical vitrification. , 2012, , .   |     | 1         |
| 47 | Aggregation processes in micellar solutions: a Raman study. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 1877-1883.   | 2.5 | 23        |
| 48 | Debye to non-Debye scaling of the Boson peak dynamics: Critical behavior and local disorder in vitreous germania. <i>Journal of Chemical Physics</i> , 2011, 135, 174506.                       | 3.0 | 18        |
| 49 | Effect of polymerization on the boson peak, from liquid to glass. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 530-533.  | 3.1 | 12        |
| 50 | Vibrational Properties of Cyclodextrinâ€“Water Solutions Investigated by Low-Frequency Raman Scattering: Temperature and Concentration Effects. <i>Food Biophysics</i> , 2011, 6, 227-232.      | 3.0 | 5         |
| 51 | Hydrogen bonding dynamics of cyclodextrinâ€“water solutions by depolarized light scattering. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 1479-1483.  | 2.5 | 17        |
| 52 | Effect of elastic properties modification on the vibrational density of states: A joint Brillouin and Raman scattering study. <i>Journal of Applied Polymer Science</i> , 2011, 122, 3672-3676. | 2.6 | 0         |
| 53 | Influence of temperature on quasi-elastic scattering in GeO <sub>2</sub> glass. <i>Philosophical Magazine</i> , 2011, 91, 1887-1893.  | 1.6 | 1         |
| 54 | The vibrational dynamics of GeO <sub>2</sub> at the glass transition: a Raman and Brillouin scattering study. <i>Philosophical Magazine</i> , 2011, 91, 1910-1916.                              | 1.6 | 4         |

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|----|--|-----|-----------|
| 55 | Elastic properties of permanently densified silica: A Raman, Brillouin light, and x-ray scattering study. Physical Review B, 2010, 81, .   | 3.2 | 49        |
| 56 | Vibrational Properties Of A Reactive Mixture Investigated During A Chemical Vitrification Process. AIP Conference Proceedings, 2010, . .   | 0.4 | 1         |
| 57 | Ergodicity breaking in strong and network-forming glassy systems. Physical Review B, 2009, 79, .   | 3.2 | 16        |
| 58 | Raman-Scattering Measurements of the Vibrational Density of States of a Reactive Mixture During Polymerization: Effect on the Boson Peak. Physical Review Letters, 2009, 102, 027402.  | 7.8 | 64        |
| 59 | A link between quasielastic scattering and sound attenuation in silver phosphate glasses. Philosophical Magazine, 2008, 88, 4079-4084.   | 1.6 | 1         |
| 60 | Cauchy relation in relaxing liquids. Journal of Chemical Physics, 2008, 128, 214502.   | 3.0 | 25        |
| 61 | Dynamic-to-static crossover in the acoustic attenuation of $\nu$ -GeO <sub>2</sub> . Europhysics Letters, 2007, 78, 36001.   | 2.0 | 9         |
| 62 | The influence of the fictive temperature and the OH content on the dynamical properties of vitreous silica: comparison of Raman, Brillouin, and neutron scattering spectra. Journal of Physics Condensed Matter, 2007, 19, 205149. | 1.8 | 4         |
| 63 | Effect of temperature on the vibrational density of states in vitreous $\text{SiO}_2$ . A Raman study. Physical Review B, 2007, 76, .  | 3.2 | 50        |
| 64 | Low-temperature phonon damping in vitreous silica explored by UV Brillouin spectroscopy. Philosophical Magazine, 2007, 87, 603-612.  | 1.6 | 1         |
| 65 | The Raman coupling function in disordered solids: a light and neutron scattering study on glasses of different fragility. Journal of Physics Condensed Matter, 2007, 19, 205145.   | 1.8 | 23        |
| 66 | Diagnostic techniques for photonic materials based on Raman and Brillouin spectroscopies. Optoelectronics Letters, 2007, 3, 188-191.   | 0.8 | 6         |
| 67 | The Debye-Waller factor approaching the glass-transition temperature in phosphate glasses. Journal of Non-Crystalline Solids, 2006, 352, 4577-4582.  | 3.1 | 1         |
| 68 | Evidence for a Crossover in the Frequency Dependence of the Acoustic Attenuation in Vitreous Silica. Physical Review Letters, 2006, 97, 035501.  | 7.8 | 100       |
| 69 | Sound attenuation in a unexplored frequency region: Brillouin ultraviolet light scattering measurements in $\text{SiO}_2$ . Physical Review B, 2005, 71, .   | 3.2 | 50        |
| 70 | Brillouin ultraviolet light scattering on vitreous silica. Journal of Non-Crystalline Solids, 2005, 351, 1919-1923.  | 3.1 | 3         |
| 71 | Quasi-elastic scattering in vitreous silica: A Raman and neutron scattering study. Journal of Non-Crystalline Solids, 2005, 351, 1928-1931.  | 3.1 | 16        |
| 72 | Acoustic and thermal properties of silica aerogels and xerogels. Physical Review B, 2004, 70, .  | 3.2 | 20        |

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|----|---|-----|-----------|
| 73 | The low energy excess of vibrational states in v-SiO <sub>2</sub> : the role of transverse dynamics. Journal of Physics Condensed Matter, 2004, 16, 8519-8530.  | 1.8 | 52        |
| 74 | Evidence of anomalous dispersion of the generalized sound velocity in glasses. Physical Review B, 2004, 69, .   | 3.2 | 71        |
| 75 | Phonon attenuation in vitreous silica and silica porous systems. Philosophical Magazine, 2004, 84, 1423-1431.   | 1.6 | 9         |
| 76 | Influence of thermal treatment in high and low frequency dynamics of silica porous systems. Journal of Non-Crystalline Solids, 2004, 345-346, 61-65.  | 3.1 | 4         |
| 77 | Neutron scattering studies of vitreous germania. Journal of Non-Crystalline Solids, 2003, 322, 7-10.  | 3.1 | 2         |
| 78 | Acoustic attenuation in silica porous systems. Journal of Non-Crystalline Solids, 2003, 322, 29-34.   | 3.1 | 25        |
| 79 | Vibrational dynamic of $\alpha$ -quartz glasses: the case of v-SiO <sub>2</sub> and v-GeO <sub>2</sub> . Journal of Non-Crystalline Solids, 2003, 322, 53-57.   | 3.1 | 13        |
| 80 | Brillouin scattering in planar waveguides. II. Experiments. Journal of Applied Physics, 2003, 94, 4882.   | 2.5 | 4         |
| 81 | X-ray diffraction and Raman scattering measurements on silica xerogels. Journal of Non-Crystalline Solids, 2002, 307-310, 135-141.  | 3.1 | 14        |
| 82 | X-ray and neutron scattering studies in vitreous silica: Acoustic nature of vibrational dynamics in the mesoscopic range. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2002, 82, 223-232. | 0.6 | 9         |
| 83 | Electro-optic modulator for high resolution Brillouin scattering measurements. Review of Scientific Instruments, 2001, 72, 198-200.   | 1.3 | 8         |
| 84 | Intramolecular origin of the fast relaxations observed in the Brillouin light scattering spectra of molecular glass formers. Physical Review E, 2000, 62, R7595-R7598.  | 2.1 | 22        |