# Mercedes Taravillo

List of Publications by Year
in descending order



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|---|---|---|---|
| 67 papers | 1,190 citations | 394421 19 h-index | 414414 32 g-index |
| 68 all docs | 68 docs citations | 68 times ranked | 1726 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Pressure-Driven Metallization in Hafnium Diselenide. Inorganic Chemistry, 2021, 60, 1746-1754. | 4.0 | 8 |
| 2 | Highs and Lows of Bond Lengths: Is There Any Limit?. Angewandte Chemie, 2021, 133, 17165-17173. | 2.0 | 5 |
| 3 | Highs and Lows of Bond Lengths: Is There Any Limit?. Angewandte Chemie - International Edition, 2021, 60, 17028-17036. | 13.8 | 13 |
| 4 | Theoretical (DFT) and experimental (Raman and FTIR) spectroscopic study on communic acids, main components of fossil resins. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 224, 117405. | 3.9 | 8 |
| 5 | Linear, Non-Conjugated Cyclic and Conjugated Cyclic Paraphenylene under Pressure. Molecules, 2019, 24, 3496. | 3.8 | 3 |
| 6 | Chemical pressureâ€“chemical knowledge: squeezing bonds and lone pairs within the valence shell electron pair repulsion model. Physical Chemistry Chemical Physics, 2019, 21, 12585-12596. | 2.8 | 12 |
| 7 | Molecules under Pressure: The Case of [<i>n</i>]Cycloparaphenylenes. Chemistry of Materials, 2019, 31, 6443-6452. | 6.7 | 5 |
| 8 | Mechanochemistry in [6]Cycloparaphenylene: A Combined Raman Spectroscopy and Density Functional Theory Study. ChemPhysChem, 2018, 19, 1903-1916. | 2.1 | 9 |
| 9 | Infrared spectroscopic study of the formation of fossil resin analogs with temperature using trans-communic acid as precursor. Microchemical Journal, 2018, 141, 294-300. | 4.5 | 4 |
| 10 | Highâ€Pressure Chemistry and the Mechanochemical Polymerization of [5]â€Cycloâ€<i>p</i>â€phenylene. Chemistry - A European Journal, 2017, 23, 16593-16604. | 3.3 | 10 |
| 11 | Pressure as driving force in the formation of Fossil Resins: Pressure Induced Changes intrans-Communic Acid studied by Raman Spectroscopy. Journal of Physics: Conference Series, 2017, 950, 042052. | 0.4 | 0 |
| 12 | Morphological changes in carbon nanohorns under stress: a combined Raman spectroscopy and TEM study. RSC Advances, 2016, 6, 49543-49550. | 3.6 | 36 |
| 13 | The Raman fingerprint of cyclic conjugation: the case of the stabilization of cations and dications in cycloparaphenylenes. Chemical Science, 2016, 7, 3494-3499. | 7.4 | 21 |
| 14 | Evidence of low-density water to high-density water structural transformation in milk during high-pressure processing. Innovative Food Science and Emerging Technologies, 2016, 38, 238-242. | 5.6 | 8 |
| 15 | From linear to cyclic oligoparaphenylenes: electronic and molecular changes traced in the vibrational Raman spectra and reformulation of the bond length alternation pattern. Physical Chemistry Chemical Physics, 2016, 18, 11683-11692. | 2.8 | 30 |
| 16 | Tunneling phenomena in aligned multi-walled carbon nanotube sheets: conductivity and Raman correlations. Materials Research Express, 2014, 1, 045603. | 1.6 | 2 |
| 17 | Stressâ€dependent correlations for resonant Raman bands in graphite with defects. Journal of Raman Spectroscopy, 2014, 45, 476-480. | 2.5 | 16 |
| 18 | Properties of Sizeable [<i>n</i>]Cycloparaphenylenes as Molecular Models of Singleâ€Wall Carbon Nanotubes Elucidated by Raman Spectroscopy: Structural and Electronâ€Transfer Responses under Mechanical Stress. Angewandte Chemie - International Edition, 2014, 53, 7033-7037. | 13.8 | 77 |

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|---|---|---|---|
| 19 | Diradicals acting through diamagnetic phenylene vinylene bridges: Raman spectroscopy as a probe to characterize spin delocalization. Journal of Chemical Physics, 2014, 140, 164903. | 3.0 | 6 |
| 20 | Effects of high pressure on unsaturated fatty acids. High Pressure Research, 2014, 34, 428-433. | 1.2 | 4 |
| 21 | Role of Water Structure on the High Pressure Micellization and Phase Transformations of Sodium Dodecanoate Aqueous Solutions. Langmuir, 2014, 30, 7343-7352. | 3.5 | 3 |
| 22 | Modeling graphite under stress: Equations of state, vibrational modes, and interlayer friction. Physical Review B, 2014, 90, . | 3.2 | 7 |
| 23 | Probing the Stress Effect on the Electronic Structure of Graphite by Resonant Raman Spectroscopy. Journal of Physical Chemistry C, 2014, 118, 25132-25140. | 3.1 | 10 |
| 24 | Chameleon-like behaviour of cyclo[n]paraphenylenes in complexes with C<sub>70</sub>: on their impressive electronic and structural adaptability as probed by Raman spectroscopy. Faraday Discussions, 2014, 173, 157-171. | 3.2 | 30 |
| 25 | Raman spectroscopic study of the formation of fossil resin analogues. Journal of Raman Spectroscopy, 2014, 45, 1230-1235. | 2.5 | 17 |
| 26 | 3D Raman mapping of uniaxially loaded 6Hâ€SiC crystals. Journal of Raman Spectroscopy, 2013, 44, 758-762. | 2.5 | 10 |
| 27 | Characterization of Salting-Out Processes during CO<sub>2</sub>-Clathrate Formation Using Raman Spectroscopy: Planetological Application. Spectroscopy Letters, 2012, 45, 407-412. | 1.0 | 5 |
| 28 | An experimental device for accurate ultrasounds measurements in liquid foods at high pressure. IOP Conference Series: Materials Science and Engineering, 2012, 42, 012044. | 0.6 | 2 |
| 29 | Nonlinear strain effects in double-resonance Raman bands of graphite, graphene, and related materials. Physical Review B, 2012, 85, . | 3.2 | 66 |
| 30 | Raman modes and GrÃ¼neisen parameters of graphite under compressive biaxial stress. Carbon, 2012, 50, 4600-4606. | 10.3 | 28 |
| 31 | DFT+<i>U</i> calculations of crystal lattice, electronic structure, and phase stability under pressure of TiO2 polymorphs. Journal of Chemical Physics, 2011, 135, 054503. | 3.0 | 221 |
| 32 | Speed of Sound in Liquid Water from (253.15 to 348.15) K and Pressures from (0.1 to 700) MPa. Journal of Chemical & Engineering Data, 2011, 56, 4800-4807. | 1.9 | 26 |
| 33 | Raman characterization of carbon materials under non-hydrostatic conditions. Carbon, 2011, 49, 973-979. | 10.3 | 33 |
| 34 | Universal compressibility behaviour of ions in ionic crystals. High Pressure Research, 2009, 29, 97-102. | 1.2 | 4 |
| 35 | Shocked materials at the intersection of experiment and simulation. Scientific Modeling and Simulation SMNS, 2008, 15, 159-186. | 0.8 | 17 |
| 36 | Graphite under non-hydrostatic conditions. High Pressure Research, 2008, 28, 583-586. | 1.2 | 1 |

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|---|---|---|---|
| 37 | Raman Spectra of Double-Wall Carbon Nanotubes under Extreme Uniaxial Stress. Nano Letters, 2008, 8, 2215-2218. | 9.1 | 27 |
| 38 | Direct measurement of the liquid 4:1 methanolâ€"ethanol equation of state up to 5ÂGPa. High Pressure Research, 2008, 28, 637-640. | 1.2 | 3 |
| 39 | Shocked materials at the intersection of experiment and simulation. Lecture Notes in Computational Science and Engineering, 2008, , 159-186. | 0.3 | 0 |
| 40 | Thermodynamic Properties of Compressed Liquid Methanol in the Vicinity of the Freezing Line. Journal of Chemical & Engineering Data, 2007, 52, 481-486. | 1.9 | 14 |
| 41 | Light-scattering study of vibrational relaxation in liquid xylenes. Journal of Chemical Physics, 2006, 124, 014503. | 3.0 | 2 |
| 42 | Thermodynamic regularities in compressed liquids: II. The reduced bulk modulus. Journal of Physics Condensed Matter, 2006, 18, 10213-10222. | 1.8 | 5 |
| 43 | Extension of the Szigeti equations: Average longitudinal-transverse frequencies and effective charges. Physical Review B, 2006, 73, . | 3.2 | 2 |
| 44 | n-pentanol at high pressures: Rotational isomerism in the liquid phase and the liquid-solid phase transition. Journal of Chemical Physics, 2006, 124, 044508. | 3.0 | 8 |
| 45 | Raman spectroscopy of aqueous methanol solutions under pressure. High Pressure Research, 2006, 26, 407-410. | 1.2 | 5 |
| 46 | Refractive index temperature and wavelength dependencies of normal saturated fatty acids in liquid state. Experimental Thermal and Fluid Science, 2005, 29, 681-684. | 2.7 | 12 |
| 47 | Pressure tuning of the Fermi resonance in liquid methanol: Implications for the analysis of high-pressure vibrational spectroscopy experiments. Journal of Chemical Physics, 2005, 123, 214502. | 3.0 | 21 |
| 48 | Dynamic light scattering in liquid and supercooled diphenylmethane. Journal of Chemical Physics, 2004, 120, 1426-1435. | 3.0 | 5 |
| 49 | Phase transitions and hindered rotation in dimethylacetylene at high pressures probed by Raman spectroscopy. Journal of Chemical Physics, 2004, 121, 11156. | 3.0 | 7 |
| 50 | Refractive index of benzene and methyl derivatives: temperature and wavelength dependencies. Experimental Thermal and Fluid Science, 2004, 28, 887-891. | 2.7 | 25 |
| 51 | Equipo para la DeterminaciÃ³n Experimental del Espectro de Luz Difundida por un LÃquido. Informacion Tecnologica (discontinued), 2004, 15, . | 0.3 | 0 |
| 52 | Desarrollo de un CalorÃmetro para la DeterminaciÃ³n de la EntalpÃa de DiluciÃ³n en Disoluciones Acuosas de Electrolitos. Informacion Tecnologica (discontinued), 2004, 15, . | 0.3 | 0 |
| 53 | Diamond as pressure sensor in high-pressure Raman spectroscopy using sapphire and other gem anvil cells. Journal of Raman Spectroscopy, 2003, 34, 264-270. | 2.5 | 35 |
| 54 | Thermodynamic regularities in compressed liquids: I. The thermal expansion coefficient. Journal of Physics Condensed Matter, 2003, 15, 2979-2989. | 1.8 | 32 |

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|---|---|---|---|
| 55 | Pressure as a Tool to Investigate Vibrational Fermi Resonance in Molecular Liquids: Study of Liquid Methanol up to 20 kbar by Raman Microscopy. Defect and Diffusion Forum, 2002, 208-209, 125-128. | 0.4 | 0 |
| 56 | The temperature dependence of the equation of state at high pressures revisited: a universal model for solids. Journal of Physics and Chemistry of Solids, 2002, 63, 1705-1715. | 4.0 | 26 |
| 57 | Effect of Pressure on Hydrogen Bonding in Liquid Methanol. Physical Review Letters, 2002, 89, 195504. | 7.8 | 47 |
| 58 | A dynamic light scattering study of the hypersonic relaxation in liquid toluene. Journal of Chemical Physics, 2001, 115, 4681-4688. | 3.0 | 12 |
| 59 | Aqueous solutions of tris(1,2-diaminoethane)cobalt(III) chloride and tris(1,3-diaminopropane)cobalt(III) chloride atT= 278.15 K. Enthalpy of dilution. Journal of Chemical Thermodynamics, 2001, 33, 1277-1284. | 2.0 | 0 |
| 60 | Enthalpies of Dilution of Cobaltâ€"Amine-Type Salts in Aqueous Solutions at 25Â°C. Journal of Solution Chemistry, 2001, 30, 1091-1100. | 1.2 | 0 |
| 61 | Application of a new equation of state for solids. High Temperatures - High Pressures, 1998, 30, 97-103. | 0.3 | 4 |
| 62 | Universal features of the equation of state of solids from a pseudospinodal hypothesis. Physical Review B, 1996, 53, 5252-5258. | 3.2 | 46 |
| 63 | Simple equation of state for solids under compression. Physical Review B, 1996, 54, 7034-7045. | 3.2 | 33 |
| 64 | Equation of State for Representing the Thermodynamic Properties of Liquids at High Pressure. The Journal of Physical Chemistry, 1995, 99, 8856-8862. | 2.9 | 4 |
| 65 | Equation of state of liquid o-xylene at low temperatures and high pressures. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 3527-3532. | 1.7 | 9 |
| 66 | Thermophysical properties of liquid m-xylene at high pressures. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 1217-1221. | 1.7 | 13 |
| 67 | Thermodynamic behaviour of liquid p-xylene near freezing. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 3645-3649. | 1.7 | 12 |