

# Mario Lino da Silva

## List of Publications by Year in descending order

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52  
papers

784  
citations

516710

16  
h-index

526287

27  
g-index

52  
all docs

52  
docs citations

52  
times ranked

572  
citing authors

#	ARTICLE	IF	CITATIONS
1	Comment on "Collision and radiative processes in emission of atmospheric carbon dioxide". Journal Physics D: Applied Physics, 2022, 55, 358001.	2.8	0
2	Heavy Particle Impact Vibrational Excitation and Dissociation Processes in CO <sub>2</sub> . Journal of Physical Chemistry A, 2021, 125, 493-512.	2.5	19
3	Hypersonic transatmospheric and exoatmospheric vehicle design using the SUAVE tool. CEAS Space Journal, 2020, 12, 171-190.	2.3	1
4	Qualification of the European Shock-Tube for High Enthalpy Research. , 2020, , .		7
5	High Temperature Applications Of New Vibrationally Specific Kinetics and Radiation Models For CO <sub>2</sub> . , 2020, , .		0
6	CDSdv: A compact database for the modeling of high-temperature $\text{CO}_2$ radiation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 245, 106848.	2.3	6
7	Computational fluid radiative dynamics of the Galileo Jupiter entry. Physics of Fluids, 2019, 31, 106104.	4.0	10
8	The LibOn Kinetics Boltzmann solver. Plasma Sources Science and Technology, 2019, 28, 043001.	3.1	79
9	Refitting of Ro-Vibrational Specific CO <sub>2</sub> Radiation Database to Vibrationally Specific. , 2019, , .		2
10	Kinetics of highly vibrationally excited O <sub>2</sub> (X) molecules in inductively-coupled oxygen plasmas. Plasma Sources Science and Technology, 2018, 27, 045006.	3.1	56
11	Reply to Comment on "The case for in situ resource utilisation for oxygen production on Mars by non-equilibrium plasmas". Plasma Sources Science and Technology, 2018, 27, 028002.	3.1	0
12	Refitting of detailed CO <sub>2</sub> IR databases to vibrationally specific databases tailored for aerothermodynamic flows. , 2018, , .		2
13	The case for in situ resource utilisation for oxygen production on Mars by non-equilibrium plasmas. Plasma Sources Science and Technology, 2017, 26, 11LT01.	3.1	51
14	The gas injection control and diagnostic system for the ESTHER shock tube. , 2016, , .		0
15	High-Pressure H <sub>2</sub> /He/O <sub>2</sub> Combustion Experiments for the Design of the ESTHER Shock-Tube Driver. , 2016, , .		2
16	SPARK: A Software Package for Aerodynamics, Radiation and Kinetics. , 2016, , .		4
17	Feasibility study of a control system based on PLC and EPICS for the ESTHER combustion gas injection. , 2015, , .		1
18	Mars EXPRESS observation of the PHOENIX entry: simulations, planning, results and lessons learned. CEAS Space Journal, 2014, 6, 3-11.	2.3	2

#	ARTICLE	IF	CITATIONS
19	Airâ€‘water â€‘tornadoâ€™-type microwave plasmas applied for sugarcane biomass treatment. Journal Physics D: Applied Physics, 2014, 47, 055201.	2.8	16
20	Non-Boltzmann Analysis of Hypersonic Air Re-Entry Flows. , 2014, , .		9
21	Coupled Hydrodynamic/State-Specific High-Temperature Modeling of Nitrogen Vibrational Excitation and Dissociation. , 2013, , .		1
22	Thermodynamics equilibrium and non equilibrium of plasma flows. IOP Conference Series: Materials Science and Engineering, 2012, 29, 012005.	0.6	0
23	Microwave plasma source operating with atmospheric pressure air-water mixtures. Journal of Applied Physics, 2012, 112, .	2.5	27
24	Rotational nonequilibrium in state-resolved models for shock-heated flows. Chemical Physics, 2012, 398, 96-103.	1.9	4
25	A multiquantum dataset for vibrational excitation and dissociation in high-temperature O <sub>2</sub> â€‘O <sub>2</sub> collisions. Chemical Physics Letters, 2012, 531, 28-33.	2.6	37
26	Non-equilibrium kinetics in N <sub>2</sub> discharges and post-discharges: a full picture by modelling and impact on the applications. Plasma Sources Science and Technology, 2011, 20, 024007.	3.1	31
27	Contribution of CO <sub>2</sub> IR Radiation to Martian Entries Radiative Wall Fluxes. , 2011, , .		29
28	Influence of nitrogen impurities on the formation of active species in Ar-O <sub>2</sub> plasmas. EPJ Applied Physics, 2011, 56, 24004.	0.7	6
29	Kinetic simulation of discharges and afterglows in molecular gases. High Temperature Material Processes, 2010, 14, 141-156.	0.6	5
30	A review of non-equilibrium dissociation rates and models for atmospheric entry studies. Plasma Sources Science and Technology, 2009, 18, 034023.	3.1	30
31	Nonequilibrium dissociation and recombination rates in nitrogen: From shock waves to discharge conditions. Chemical Physics, 2009, 358, 123-131.	1.9	7
32	Hot and super-hot hydrogen atoms in microwave plasma. Applied Physics Letters, 2009, 95, .	3.3	10
33	Radiative Trail of the PHOENIX Entry. , 2009, , .		3
34	Vibrational distributions in N <sub>2</sub> with an improved calculation of energy levels using the RKR method. Chemical Physics, 2008, 348, 187-194.	1.9	51
35	Radiation from an equilibrium CO <sub>2</sub> â€‘N <sub>2</sub> plasma in the [250â€‘850â€™nm] spectral region: I. Experiment. Plasma Sources Science and Technology, 2008, 17, 035012.	3.1	18
36	Radiation from an equilibrium CO <sub>2</sub> â€‘N <sub>2</sub> plasma in the [250â€‘850â€™nm] spectral region: II. Spectral modelling. Plasma Sources Science and Technology, 2008, 17, 035013.	3.1	16

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37	State-Resolved Dissociation Rates for Extremely Nonequilibrium Atmospheric Entries. Journal of Thermophysics and Heat Transfer, 2007, 21, 40-49.	1.6	54
38	Nonequilibrium Dissociation Processes in Hyperbolic Atmospheric Entries. Journal of Thermophysics and Heat Transfer, 2007, 21, 303-310.	1.6	32
39	Two-temperature models for nitrogen dissociation. Chemical Physics, 2007, 342, 275-287.	1.9	44
40	An adaptive line-by-line statistical model for fast and accurate spectral simulations in low-pressure plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 108, 106-125.	2.3	44
41	Nonequilibrium Dissociation Processes in Hyperbolic Atmospheric Entries. , 2006, , .		0
42	Plasma Radiation in Earth and Mars Atmospheric Entries. , 2006, , .		0
43	Arrays of radiative transition probabilities for plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 102, 348-386.	2.3	41
44	GPRD, a database for the spectral properties of diatomic molecules of atmospheric interest. Journal of Molecular Spectroscopy, 2006, 236, 148-149.	1.2	12
45	Modelling of a CO <sub>2</sub> -N <sub>2</sub> Plasma Flow in a Supersonic Arcjet Facility. Journal of Thermophysics and Heat Transfer, 2006, 20, 680-688.	1.6	5
46	Modelling of arc jet plasma flow in transitional regime by Navier Stokes and state-to-state coupling. AIP Conference Proceedings, 2005, , .	0.4	1
47	Strong Shock-Wave Interaction With an Expanding Plasma Flow: Influence on the CN Molecule Internal Modes. AIP Conference Proceedings, 2005, , .	0.4	1
48	Modelling of the Arc-Jet Plasma Flow in the SR5 Nozzle Using a Thermochemical Nonequilibrium and a State-to-State Approach. AIP Conference Proceedings, 2005, , .	0.4	2
49	A Line-by-Line Spectroscopic Code for the Simulation of Plasma Radiation During Planetary Entries: The SESAM Code. , 2004, , .		4
50	Evolution of the Internal Energy States of a Molecule Through an Hypersonic Bow Shock. , 2004, , .		0
51	Modelling and Experimental Analysis of CO <sub>2</sub> /N <sub>2</sub> Plasma Flows With and Without the Presence of an Obstacle. , 2003, , .		2
52	MODELING OF THE RADIATIVE EMISSION OF A PLASMA SURROUNDING A SPACE PROBE ENTERING MARS ATMOSPHERE. High Temperature Material Processes, 2003, 7, 115-125.	0.6	0