

# Alessandro Munafa

## List of Publications by Year in descending order

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Version: 2024-02-01

38  
papers

337  
citations

1163117

8  
h-index

1372567

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g-index

38  
all docs

38  
docs citations

38  
times ranked

135  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Multi-Physics Modeling Framework for Inductively Coupled Plasma Wind Tunnels. , 2022, , .		12
2	Non-equilibrium plasma generation via nano-second multi-mode laser pulses. Journal of Applied Physics, 2022, 131, .	2.5	6
3	Rovibrational-Specific Master Equation Analysis of High-Temperature Air Mixture. , 2022, , .		0
4	Self-consistent magneto-hydrodynamic modeling of ICP discharges. , 2022, , .		12
5	Rovibrational-Specific QCT and Master Equation Study on $N_{2}(X^{1}g_{g} + O^{3}P)$ and $NO(X^{2} + N_{4}S)$ Systems in High-Energy Collisions. Journal of Physical Chemistry A, 2022, 126, 3273-3290.	2.5	17
6	High-fidelity simulation of RF inductively coupled plasma discharges. , 2022, , .		0
7	Self-Consistent Computational Fluid Dynamics of Supersonic Drag Reduction via Upstream-Focused Laser-Energy Deposition. AIAA Journal, 2021, 59, 1214-1224.	2.6	16
8	Radio communication blackout analysis of ExoMars re-entry mission using raytracing method. , 2021, , .		1
9	Numerical study on early-times laser controlled detonative propulsion. , 2021, , .		1
10	Physics-driven modeling for aerothermodynamics. , 2021, , .		1
11	Laser-induced non-equilibrium plasma kernel dynamics. Journal Physics D: Applied Physics, 2020, 53, 025201.	2.8	48
12	Reduced-Order Modeling for Non-equilibrium Air Flows. , 2020, , .		3
13	A computational model for nanosecond pulse laser-plasma interactions. Journal of Computational Physics, 2020, 406, 109190.	3.8	55
14	High-Order Techniques for Multi-Component Turbulent Non-Equilibrium Hypersonic Flows. , 2020, , .		1
15	Collinear dual-pulse laser optical breakdown and energy deposition. Journal Physics D: Applied Physics, 2020, 53, 205202.	2.8	19
16	Laser-Induced Breakdown Ignition of Low-Pressure Hydrogen-Air Premixtures. , 2020, , .		1
17	Characterization of non-equilibrium hypersonic flows using maximum entropy linear model. AIP Conference Proceedings, 2019, , .	0.4	2
18	Supersonic and hypersonic non-equilibrium flow control using laser energy deposition. , 2019, , .		5

#	ARTICLE	IF	CITATIONS
19	Modeling of Air Breakdown by Single-Mode and Multi-Mode Lasers. , 2019, , .		6
20	Application of ab-initio based grouped rates for modeling non-equilibrium flow physics. , 2019, , .		0
21	Modeling of Laser-Induced Breakdown Phenomena in Non-Equilibrium Plasmas. , 2018, , .		15
22	Calculation of Thermochemical Properties of Carbon-cluster Ablation Species. , 2018, , .		1
23	One-dimensional modeling methodology for shock tubes: Application to the EAST facility. , 2018, , .		3
24	FEM Simulation of Laser-Induced Plasma Breakdown Experiments for Combustion Applications. , 2017, , .		11
25	A Reduced-order NLTE Kinetic Model for Radiating Plasmas of Outer Envelopes of Stellar Atmospheres. Astrophysical Journal, 2017, 838, 126.	4.5	27
26	State-to-State and reduced-order models for recombination and energy transfer in aerothermal environments. , 2016, , .		1
27	A tightly coupled non-equilibrium model for inductively coupled radio-frequency plasmas. Journal of Applied Physics, 2015, 118, .	2.5	21
28	Dissociation and Energy transfer study of N2-N and N2-N2 interactions by using rovibrational and coarse-grained state-to-state models. , 2015, , .		4
29	State-to-State Modeling of CO for Mars Entry Applications. , 2015, , .		0
30	NLTE Magneto-Hydrodynamic Model for an Inductively Coupled Plasma Facility. , 2015, , .		0
31	Development of Reduced Chemistry Models for High Enthalpy and Plasma Flows. , 2014, , .		0
32	Development and Testing of an Ablation Model Based on Plasma Wind Tunnel Experiments. , 2014, , .		10
33	Investigation of Dissociation Phenomena in Nonequilibrium Shock Layers. , 2014, , .		0
34	A spectral-Lagrangian Boltzmann solver for a multi-energy level gas. Journal of Computational Physics, 2014, 264, 152-176.	3.8	29
35	Investigation of nonequilibrium effects across normal shock waves by means of a spectral-Lagrangian Boltzmann solver. , 2013, , .		0
36	Investigation of nonequilibrium internal energy excitation in shock waves by means of a spectral-Lagrangian Boltzmann solver. , 2012, , .		2

#	ARTICLE	IF	CITATIONS
37	Investigation of Nonequilibrium Effects in Axisymmetric Nozzle and Blunt Body Nitrogen Flows by Means of a Reduced Rovibrational Collisional Model. , 2012, , .		5
38	Mechanism Reduction for Rovibrational Energy Excitation and Dissociation of Molecular Nitrogen in Hypersonic Flows. , 2011, , .		2