

# Emilio Mariotti

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6607467/publications.pdf>

Version: 2024-02-01

123  
papers

1,354  
citations

331670

21  
h-index

395702

33  
g-index

124  
all docs

124  
docs citations

124  
times ranked

602  
citing authors

#	ARTICLE	IF	CITATIONS
1	Laser double optical resonance excitation-ionization of Mo with optogalvanic detection. <i>Physica Scripta</i> , 2022, 97, 024004.	2.5	1
2	Polarimetry for measuring the vacuum magnetic birefringence with quasi-static fields: a systematic study for the VMB@CERN experiment. <i>European Physical Journal C</i> , 2022, 82, 1.	3.9	3
3	Optical control of high-density alkali atom vapor in antirelaxation coated cells. <i>Journal of Physics: Conference Series</i> , 2021, 1859, 012055.	0.4	1
4	Particle detection in rare gas solids: DEMIURGOS experiment. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020, 958, 162434.	1.6	6
5	Dynamics of Optical Pumping Processes in Coated Cells Filled with Rb Vapour. <i>Journal of Contemporary Physics</i> , 2020, 55, 383-396.	0.6	2
6	A feasibility study for a low energy threshold particle detector in a xenon crystal. <i>Journal of Instrumentation</i> , 2020, 15, C03004-C03004.	1.2	3
7	Nanoparticle formation in nanoporous structures and applications. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	3.3	0
8	New ideas on prospective low energy threshold detectors for dark matter searches. <i>International Journal of Modern Physics Conference Series</i> , 2020, 50, 2060009.	0.7	0
9	A NEW SETUP FOR THE STUDY OF ADSORPTION/DESORPTION PROCESSES AND NANOPARTICLES FORMATION IN POROUS ALUMINA. <i>Journal of the Siena Academy of Sciences</i> , 2019, 10, .	0.0	1
10	Novel approaches in low energy threshold detectors for Dark Matter searches. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2019, 936, 244-246.	1.6	2
11	Dark matter search by laser spectroscopy. , 2019, , .		0
12	Optical characterization of antirelaxation coatings. <i>Journal of Physics: Conference Series</i> , 2018, 992, 012039.	0.4	1
13	New calibrated evaporation oven for time of flight mass spectrometer in offline SPES laser laboratory. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	0
14	Enhanced Atomic Desorption of 209 and 210 Francium from Organic Coating. <i>Scientific Reports</i> , 2017, 7, 4207.	3.3	8
15	Observation of $7pP_{2,3} \rightarrow 7dD_2$ optical transitions in 209 and 210 francium isotopes. <i>Optics Letters</i> , 2017, 42, 3682.	3.3	2
16	Experimental setup for the growth of solid crystals of inert gases for particle detection. <i>Review of Scientific Instruments</i> , 2017, 88, 113303.	1.3	7
17	Buffer gas-assisted four-wave mixing resonances in alkali vapor excited by a single cw laser. <i>European Physical Journal D</i> , 2016, 70, 1.	1.3	3
18	Forty years after the first dark resonance experiment: an overview of the COSMA project results. <i>Proceedings of SPIE</i> , 2016, , .	0.8	0

#	ARTICLE	IF	CITATIONS
19	First results on Ge resonant laser photoionization in hollow cathode lamp. Review of Scientific Instruments, 2016, 87, 02B708.	1.3	7
20	Sub-doppler spectroscopy of sodium vapor in an ultrathin cell. Optics and Spectroscopy (English) Tj ETQq0 0 0 rgBTj Overlock 10 Tf 50 . . . . .	0.6	3
21	ToF diagnostic of Tin resonant laser photoionization in SPES laser offline laboratory. Journal of Instrumentation, 2016, 11, C09001-C09001.	1.2	4
22	Magnetic-field-compensation optical vector magnetometer. Applied Optics, 2016, 55, 892.	2.1	21
23	Light-induced atomic desorption dynamics in cells with different coatings. , 2015, , .		0
24	Photo-induced modifications of the substrate-adsorbate interaction in K-loaded porous glass. Journal Physics D: Applied Physics, 2015, 48, 205301.	2.8	2
25	Francium trapping at the INFN-LNL facility. International Journal of Modern Physics E, 2014, 23, 1430009.	1.0	9
26	Light desorption from an yttrium neutralizer for Rb and Fr magneto-optical trap loading. Journal of Chemical Physics, 2014, 141, 134201.	3.0	10
27	Laser-driven self-assembly of shape-controlled potassium nanoparticles in porous glass. Laser Physics Letters, 2014, 11, 085902.	1.4	5
28	Giant modification of atomic transition probabilities induced by a magnetic field: forbidden transitions become predominant. Laser Physics Letters, 2014, 11, 055701.	1.4	39
29	Optical response of alkali metal atoms confined in nanoporous glass. Quantum Electronics, 2014, 44, 263-268.	1.0	2
30	Spin randomization of light-induced desorbed Rb atoms. Journal of Physics: Conference Series, 2014, 514, 012029.	0.4	4
31	Light-induced atomic desorption in cells with different PDMS coatings. Journal of Physics: Conference Series, 2014, 514, 012030.	0.4	1
32	Detection of excited level population transfer in an MOT through the measurement of trapped atom number. Measurement Science and Technology, 2013, 24, 015201.	2.6	7
33	A magneto-optical trap for radioactive atoms. Proceedings of SPIE, 2013, , .	0.8	0
34	Light-induced atomic desorption for miniaturization of magneto-optical sensors. Proceedings of SPIE, 2013, , .	0.8	4
35	A phenomenological model for collisional coherence transfer in an optically pumped atomic system. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 055502.	1.5	0
36	Atomic sources controlled by light: main features and applications. , 2010, , .		1

#	ARTICLE	IF	CITATIONS
37	Coherent transfer of population in an atomic system in the presence of buffer gas. , 2010, , .		0
38	Optical stabilization of Rb vapor density above thermal equilibrium. Journal of Modern Optics, 2010, 57, 1305-1310.	1.3	5
39	Light-induced atomic desorption and related phenomena. Physica Scripta, 2009, T135, 014012.	2.5	13
40	Accurate measurements of transition frequencies and isotope shifts of laser-trapped francium. Optics Letters, 2009, 34, 893.	3.3	16
41	Full control of sodium vapor density in siloxane-coated cells using blue LED light-induced atomic desorption. Optics Letters, 2009, 34, 2643.	3.3	25
42	Population Loss in Closed Optical Transitions $\hat{I}_{\sigma}^{\pm}$ of Rb and Cs Atoms Confined in Micrometric Thin Cells. Acta Physica Polonica A, 2009, 116, 495-497.	0.5	3
43	Optical characterization and manipulation of alkali metal nanoparticles in porous silica. European Physical Journal D, 2008, 49, 201-210.	1.3	26
44	Saturated absorption spectroscopy: Elimination of crossover resonances with the use of a nanocell. Laser Physics, 2008, 18, 749-755.	1.2	22
45	Optical recording in Rb loaded-porous glass by reversible photoinduced phase transformations. Optics Express, 2008, 16, 1377.	3.4	26
46	Measurement of diffusion coefficients of francium and rubidium in yttrium based on laser spectroscopy. Physical Review A, 2008, 78, .	2.5	5
47	A francium MOT for atomic parity violation measurements. Proceedings of SPIE, 2008, , .	0.8	4
48	Light induced atomic desorption from dry-film coatings. Journal of Chemical Physics, 2007, 127, 044706.	3.0	18
49	<title>Light-induced processes on atoms and clusters confined in nanoporous silica and organic films</title>. , 2007, , .		0
50	Francium sources and traps for fundamental interaction studies. European Physical Journal: Special Topics, 2007, 150, 389-392.	2.6	28
51	Electromagnetically Induced Absorption Resonance Sign Reversal. Acta Physica Polonica A, 2007, 112, 823-828.	0.5	5
52	Storing Information in Nanoporous Silica through Light Controlled Rb Cluster Growth and Demolition. , 2007, , .		0
53	Prospects for parity violation measurements in cold francium atoms. , 2007, , 185-187.		0
54	Characterization of The Legnaro Fr MOT. , 2007, , .		0

#	ARTICLE	IF	CITATIONS
55	Coherent population trapping resonances in Cs atoms excited by elliptically polarized light. Physical Review A, 2006, 74, .	2.5	27
56	Reversible Light-Controlled Formation and Evaporation of Rubidium Clusters in Nanoporous Silica. Physical Review Letters, 2006, 97, 157404.	7.8	30
57	Production of radioactive beams of francium. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 557, 390-396.	1.6	15
58	Desorption of Rb and Cs from PDMS induced by non resonant light scattering. European Physical Journal D, 2006, 37, 319-325.	1.3	24
59	Francium sources at Laboratori Nazionali di Legnaro: Design and performance. Review of Scientific Instruments, 2006, 77, 03A701.	1.3	5
60	Light-induced atomic desorption from PDMS films and porous glass: application and fundamental issues. Journal of Physics: Conference Series, 2005, 19, 78-85.	0.4	3
61	Photo-ejection and transport of alkali atoms embedded in nano-porous silica. Journal of Physics: Conference Series, 2005, 19, 86-89.	0.4	2
62	Light-induced atomic desorption from siloxane film loaded with Rb and Cs. Journal of Physics: Conference Series, 2005, 19, 90-93.	0.4	1
63	Towards a simple and performing CPT based magnetometer: optimization of experimental parameters (Invited Paper). , 2005, , .		5
64	Excitation functions for $^{208}\text{Fr}$ produced in the $^{18}\text{O}+^{197}\text{Au}$ fusion reaction. Physical Review C, 2005, 71, .	2.9	39
65	Light-induced atomic desorption from porous silica. Europhysics Letters, 2004, 67, 983-989.	2.0	42
66	Coherent Population Trapping for Electromagnetic Field Measurement. , 2004, , .		0
67	Coherent spectroscopy in Cs for precise magnetic field measurements. , 2004, , .		0
68	Coherent effects in the field of elliptically polarized light. , 2004, , .		0
69	Production and trapping of francium atoms. Nuclear Physics A, 2004, 746, 421-424.	1.5	12
70	Pulsed laser desorption of alkali atoms from PDMS thin films. Applied Surface Science, 2004, 228, 40-47.	6.1	18
71	The Legnaro Francium Magneto-Optical Trap. Hyperfine Interactions, 2003, 146/147, 83-89.	0.5	10
72	Two-color coherent population trapping in a single Cs hyperfine transition, with application in magnetometry. Applied Physics B: Lasers and Optics, 2003, 76, 667-675.	2.2	27

#	ARTICLE	IF	CITATIONS
73	Cooling and trapping of radioactive atoms: the Legnaro francium magneto-optical trap. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 953.	2.1	12
74	Fast and efficient loading of a Rb magneto-optical trap using light-induced atomic desorption. Physical Review A, 2003, 67, .	2.5	79
75	Temperature dependence of coherent resonances in Na and Cs cells. , 2003, , .		0
76	Laser cooling and trapping of radioactive atoms. , 2003, 5226, 11.		0
77	Trapping of Radioactive Atoms: the Legnaro Francium Magneto-Optical Trap. Physica Scripta, 2003, T105, 15.	2.5	7
78	The Legnaro Francium Magneto-Optical Trap. , 2003, , 83-89.		0
79	Coherent spectroscopy of degenerate two-level systems in Cs. Physical Review A, 2002, 66, .	2.5	84
80	Achromatic optical device for generation of a broadband frequency spectrum with high-frequency stability and sharp termination. Journal of the Optical Society of America B: Optical Physics, 2001, 18, 335.	2.1	4
81	Light-induced atomic desorption: recent developments. , 2001, 4397, 226.		0
82	A new class of photo-induced phenomena in siloxane films. European Physical Journal D, 2001, 13, 231-235.	1.3	30
83	Sodium MOT collection efficiency as a function of the trapping and repumping laser frequencies and intensities. European Physical Journal D, 2001, 13, 71-82.	1.3	15
84	Magneto-optical trap operating on a magnetically induced level-mixing effect. Physical Review A, 2001, 64, .	2.5	10
85	Explosive Vaporization of Metallic Sodium Microparticles by CW Resonant Laser Radiation. Physical Review Letters, 2001, 87, 215002.	7.8	3
86	Development of a broadband laser in the UV region. , 2000, 127, 503-506.		0
87	Light-induced diffusion and desorption of alkali metals in a siloxane film: Theory and experiment. Physical Review A, 1999, 60, 4693-4700.	2.5	70
88	Simulation of a laser diagnostics to detect the string configuration of an ion beam in a storage ring. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 430, 10-23.	1.6	0
89	Observation of sodium molecular formation induced by resonant laser atomic excitation and three-body collisions. Optics Communications, 1999, 168, 355-362.	2.1	2
90	A Monte Carlo simulation of a stroboscopic laser diagnostics of ordered ion beams in a storage ring. , 1998, 115, 23-27.		0

#	ARTICLE	IF	CITATIONS
91	First demonstration of "white-light" laser cooling of a stored ion beam. , 1998, 115, 47-52.		0
92	Frequency stabilisation of a broad-band dye laser by light-induced drift. Optics Communications, 1998, 146, 196-200.	2.1	0
93	Experimental realization of coherent dark-state magnetometers. Europhysics Letters, 1998, 44, 31-36.	2.0	93
94	"White-light" Laser Cooling of a Fast Stored Ion Beam. Physical Review Letters, 1998, 80, 2129-2132.	7.8	25
95	Light-induced atomic desorption from silane-coated surfaces. , 1998, , .		0
96	White-light laser cooling of high-energy ion beams. , 1998, 3485, 163.		0
97	Energy-pooling ionization and electron - ion recombination measurements in indium. Journal of Physics B: Atomic, Molecular and Optical Physics, 1997, 30, 473-482.	1.5	10
98	Energy-pooling ionization produced by the collisions of In atoms in presence of a resonant laser field. AIP Conference Proceedings, 1997, , .	0.4	0
99	CRYSTAL: a storage ring for crystalline beams and other applications. Nuclear Physics A, 1997, 626, 583-588.	1.5	0
100	Sharp edge broad-band lasers for "white-light" cooling in storage rings. , 1997, 108, 259-266.		2
101	Ion beam crystallization. , 1997, 108, 355-372.		0
102	A storage ring for crystalline beam studies. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 391, 147-155.	1.6	3
103	An efficient photo-atom source. Optics Communications, 1997, 134, 121-126.	2.1	16
104	White-light laser cooling of ions in a storage ring. Hyperfine Interactions, 1996, 99, 259-265.	0.5	11
105	Ultrashort laser-pulse diagnostics for detection of ordering within an ion beam. Hyperfine Interactions, 1996, 99, 267-276.	0.5	1
106	Transverse laser cooling of ions in a storage ring. Optics Communications, 1996, 123, 530-534.	2.1	5
107	Generation of a frequency comb with a sharp edge of adjustable intensity and frequency. Optics Communications, 1996, 132, 269-274.	2.1	14
108	Stroboscopic laser diagnostics for detection of ordering in a one-dimensional ion beam. Physical Review A, 1995, 52, 2464-2467.	2.5	4

#	ARTICLE	IF	CITATIONS
109	Light-Induced Atom Desorption. Europhysics Letters, 1994, 25, 639-643.	2.0	83
110	Dynamics of rubidium light-induced atom desorption (LIAD). Chemical Physics, 1994, 187, 111-115.	1.9	28
111	A 670 nm external-cavity single mode diode laser continuously tunable over 18 GHz range. Optics Communications, 1994, 107, 83-87.	2.1	13
112	Radiation trapping and vapor density of indium confined in quartz cells. Optics Communications, 1994, 106, 197-201.	2.1	9
113	Light-induced drift: last issues. , 1993, , .		0
114	Energy pooling collision cross section measurements in indium: the $\text{In}(6S1/2)+\text{In}(6S1/2)$ to $\text{In}(nP)+\text{In}(5P3/2)$ process. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, 2335-2344.	1.5	13
115	Nonthermal light-induced atom desorption. AIP Conference Proceedings, 1993, , .	0.4	0
116	White-Light-Induced Drift on Sodium Vapour. Europhysics Letters, 1992, 17, 309-314.	2.0	4
117	Light-induced vapor jets. Physical Review A, 1992, 46, R3601-R3604.	2.5	5
118	Vapor diffusion and atom cooling by white light. , 1992, 1726, 156.		0
119	Atom cooling by white light. Applied Physics B, Photophysics and Laser Chemistry, 1992, 54, 428-433.	1.5	22
120	Wall effects on light-induced drift. Optics Communications, 1992, 88, 341-346.	2.1	20
121	Light-induced-drift stationary states. Physical Review A, 1988, 38, 1327-1334.	2.5	15
122	Light induced drift of sodium atoms in absence of wall adsorption. Optics Communications, 1987, 63, 43-48.	2.1	27
123	Light induced desorption and diffusion of alkali atoms in porous glasses. , 0, , .		0