

Listă de lucrări

Dr. Cătălin Mihai TICOȘ, CS I

Articole în jurnale cu referenți

- [59] D. Ticoș, A. Scurtu, M. Oane, C. Diplășu, G. Giubega, I. Călina, **C. M. Ticoș**,
Complementary dosimetry for a 6 MeV electron beam,
Results in Physics 14, 102377 (2019).
- [58] **C. M. Ticoș**, D. Ticos, J.D. Williams,
Kinetic effects in a plasma crystal induced by an external electron beam,
Physics of Plasmas 26, 43702 (2019).
- [57] L. Avotina, M. Lungu, P. Dinca, B. Butoi, G. Cojocaru, R. Ungureanu, A. Marcu, C. Luculescu, C. Hapenciuc,
P.C. Ganea, A. Pețjukevics, C.P. Lungu, G. Kizane, **C. M. Ticoș**, S. Antohe,
Irradiation of nuclear materials with laser-plasma filaments produced in air and deuterium by terrawatt (TW) laser pulses,
Journal of Physics D-Applied Physics 51, 25302 (2018).
- [56] **C. M. Ticoș**, M. Galatanu, A. Galatanu, C. Luculescu, A. Scurtu, N. Banu, D. Ticos,
Cracks and nanoparticles produced on tungsten surface by dense plasma jets,
Applied Surface Science 434, 1122-1128 (2018).
- [55] **C. M. Ticoș**, A. Scurtu, D. Ticos,
A pulsed "plasma broom" for dusting off surfaces on Mars,
New Journal of Physics 19, 063006 (2017).
- [54] M. G. Florescu, O. G. Dului, D. Pantazi, **C. M. Ticoș**, D. Sporea, R. Vasilache, V. Ionescu, M. Oane,
*Radiological safety assessment for the experimental area of a hyper-intense laser with peak-power of 1 PW—
CETAL*,
Radiation Protection Dosimetry 175 (1), 104-109 (2017).
- [53] M. Oane, I.N. Mihailescu, A. Buca, C. Ristoscu, G. Popescu-Pelin, **C. M. Ticoș**,
*Two-temperature model using the Cattaneo-Vernotte equation in the Anisimov-Nolte model for application in
laser additive manufacturing*,
Digest Journal of Nanomaterials and Biostructures 12, 1247-1257 (2017).
- [52] N. Banu, **C. M. Ticoș**,
Precession of cylindrical dust particles in the plasma sheath
Physics of Plasmas 22 (10), 103704 (2015).
- [51] O. Budriga, E. D'Humieres, **C.M. Ticoș**
Simulations for protons and electrons acceleration with the 1 PW laser pulse from CETAL facility
Romanian Reports in Physics 67 (4), 1271 (2015).
- [501] **C. M. Ticoș**, A. Scurtu, D. Toader, N. Banu,
Experimental demonstration of Martian soil simulant removal from a surface using a pulsed plasma jet
Review of Scientific Instruments 86, 033509 (2015).
- [49] N. Iacob, G. Schinteie, P. Palade, **C. M. Ticoș**, V. Kuncser
Stepped heating procedure for experimental SAR evaluation of ferrofluids
Material Letters E 38, 57 (2015).
- [48] D. Toader, M. Oane, **C.M. Ticos**,
Collimated electron beam accelerated at 12 kV from a Penning discharge
Review of Scientific Instruments 86, 013301 (2015).

- [47] **C. M. Ticoș**,
Highly accelerated microparticles in plasma flows,
Romanian Reports in Physics 67 (3), 1018 (2015).
- [46] M. Oane, A. Peled, D. Toader, P. Mursa and **C. M. Ticoș**,
Semi-analytical solution of the thermal field distribution in a semiconductor under simultaneous irradiation by three laser fields,
Lasers in Engineering 32 (3-4), 161 (2015).
- [45] M. Oane, I.N. Mihăilescu, **C. M. Ticoș**, N. Banu, L.M. Mitu, I. Neguț, N. Mihăilescu, D. Ticoș,
General two -photons non-Fourier model for weak laser-solid interaction,
Journal of Intense Pulsed Lasers and Applications in Advanced Physics 5 (1), 5-8 (2015).
- [44] M. Oane, D. Toader, N. Iacob, **C. M. Ticoș**,
Thermal phenomena induced in a small tungsten sample during irradiation with a few MeV electron beam: Experiment versus simulations,
Nuclear Instruments and Methods in Physics Research B 337, 17-20 (2014).
- [43] M. Oane, D. Toader, I. Neguț, I.N. Mihăilescu, N. Mihăilescu, A. Visan, **C. M. Ticoș**
Thermal phenomena induced in a small C sample under irradiation with a few MeV electron beam by analogy with the laser- metal interaction formalism.
Journal of Intense Pulsed Lasers and Applications in Advanced Physics 4, 65-70 (2014).
- [42] C.P. Lungu, C. Porosnicu, I. Jepu, M. Lungu, A. Marcu, C. Luculescu, **C. Ticoș**, A. Marin, C.E.A. Grigorescu,
The behavior of W, Be and C layers in interaction with plasma produced by terawatt laser beam pulses,
Vacuum 110, 207-212 (2014).
- [41] M. Oane, D. Toader, N. Iacob, **C. M. Ticoș**,
Thermal phenomena induced in a small graphite sample during irradiation with a few MeV electron beam: Experiment versus theoretical simulations,
Nuclear Instruments and Methods in Physics Research B 318, 232–236 (2014).
- [40] C. P. Lungu, **C. M. Ticoș**, C. Porosnicu, I. Jepu, M. Lungu, A. Marcu, C. Luculescu, G. Cojocaru, D. Ursescu, R. Banici, and G. R. Ungureanu,
Periodic striations on beryllium and tungsten surfaces by indirect femtosecond laser irradiation,
Applied Physics Letters 104, 101604-1/4 (2014).
- [39] **C. M. Ticoș**,
Bandgaps in the dispersion of waves on a string of dust particles floating in plasma,
U.P.B. Sci. Bull., Series A 76, 193-198 (2014).
- [38] D. Toader, M.L. Munteanu, N. Banu, A. Scurtu, **C. M. Ticoș**,
Evaluation of submillimeter electromagnetic waves scattering on dust particles in plasma,
Journal of Optoelectronics and Advanced Materials 15, 294-298 (2013).
- [37] N. Banu, M. Munteanu, D. Toader, A. Scurtu, **C. M. Ticoș**,
Survey of Plasma Crystal Symmetry,
Journal of Optoelectronics and Advanced Materials 15, 976 -981 (2013).
- [36] L. M. Mitu, D. Toader, N. Banu, A. Scurtu, **C. M. Ticoș**,
1-D Photonic Dusty Plasma Crystal,
Journal of Applied Physics 114, 113305-1/10 (2013).
- [35] **C. M. Ticoș**, L. M. Munteanu, N. Banu, A. Scurtu,
High Speed Imaging of Dusty Plasmas,
Journal of Plasma Physics 79, 273–285 (2013).
- [34] **C. M. Ticoș**, D.S. Stoica, G. L. Delzanno,
Generation of dust projectiles passing over an obstacle in the plasma sheath
Physics of Plasmas 19, 083701 (2012).
- [33] M. L. Pascu, G.V. Popescu, **C. M. Ticos**, I. R. Andrei,
Unresonant interactions of laser beams with microdroplets,
Journal of the European Optical Society -Rapid Publication 7, pp 12001/1-17 (2012).

- [32] G. Salamu, O. Sandu, O., F. Voicu, M. Dejanu, D. Popa, S. Parlac, **C. Ticos**, N. Pavel, T. Dascalu
Study of flame development in 12% methane-air mixture ignited by laser,
Optoelectronics and Advanced Materials-Rapid Communications 5 (11), 1166-1169 (2011).
- [31] **C. M. Ticoş**, Z. Wang, G. A. Wurden,
Observation of the Evolution of a Supersonic Plasma Jet launched by a Coaxial Gun,
IEEE Transactions on Plasma Sciences 39 (11), 2388 (2011).
- [30] A. Marcu, **C. M. Ticoş**, C. Grigoriu, I. Jepu, C. Porosnicu, A. M. Lungu, C. P. Lungu,
Simultaneous Carbon and Tungsten Thin Film Deposition Using Two Thermionic Vacuum Arcs,
Thin Solid Films 519, 4074 (2011).
- [29] **C. M. Ticoş**, I. R. Andrei, M. L. Pascu, M. Bulinski,
Experimental Control of Power Dropouts by Current Modulation in a Semiconductor Laser with Optical Feedback,
Physica Scripta 83, 055402 (2011).
- [28] **C. M. Ticoş**, I. Jepu, C. P. Lungu, P. Chiru, V. Zaroschi, A. M. Lungu,
Removal of Floating Dust in Glow Discharge Using Plasma Jet,
Applied Physics Letters 97, 011501-1/3 (2010).
- [27] **C. M. Ticoş**, I. Jepu, C. P. Lungu, P. Chiru, V. Zaroschi, A. M. Lungu,
Levitated Dust Particles Subjected to Plasma Jet,
Journal of Plasma Physics 76, 501-510 (2010).
- [26] I. R. Andrei, **C. M. Ticoş**, M. Bulinski, M. L. Pascu
Chaotic Behavior in the Emission of Semiconductor Lasers Optically Coupled with an External Cavity,
Journal of Optoelectronics and Advanced Materials 12, 63-67 (2010).
- [25] D. A. Gates *et al* (196 co-authors in alphabetical order)
Overview of Results from the National Spherical Torus Experiment (NSTX),
Nuclear Fusion 49, 104016 (2009).
- [24] **C. M. Ticoş**, Z. Wang, G. A. Wurden,
Hypervelocity Dust Storm Launched with a Coaxial Plasma Gun,
IEEE Transactions on Plasma Sciences 36 (5), 2770-2774 (2008).
- [23] Z. Wang, **C. M. Ticoş**,
Dust as a Versatile Matter for High-Temperature Plasma Diagnostic,
Review of Scientific Instruments 79, 10F333/1-3 (2008).
- [22] **C. M. Ticoş**, Z. Wang, G. A. Wurden, J. L. Kline, D. S. Montgomery, L. A. Dorf, P. K. Shukla,
Plasma Drag Acceleration of a Dust Cloud to Hypervelocities,
Physical Review Letters 100, 155002 (2008).
- [21] D. Rasleanu, V. Ionescu, G. Prodan, V. Ciupina, C.P. Lungu, C. Surdu-Bob, M. Osiac, O. Pompilian, M. Badulescu, A.M. Lungu, **C. Ticoş**, V. Zaroschi, L. Trupina, C. Miclea,
Nanostructured PZT Type Thin Films Prepared by the Thermionic Vacuum Arc Method,
Journal of Optoelectronics and Advanced Materials 10, 3041 (2008).
- [20] **C. M. Ticoş**, Z. Wang, G. A. Wurden, J. L. Kline, D. S. Montgomery,
Plasma Jet Acceleration of Dust Particles to Hypervelocities,
Physics of Plasmas 15, 103701/1-9 (2008).
- [19] Z. Wang, **C. M. Ticoş** G. A. Wurden,
Dust Trajectories and Applications in Plasmas Beyond Strongly-Coupled laboratory Dusty Plasmas,
Physics of Plasmas 14, 103701 (2007).
- [18] **C. M. Ticoş**,
Ion-driven Dust Waves in a RF Plasma Crystal,
Romanian Journal of Physics 52, 703 (2007).
- [17] **C. M. Ticoş**, Z. Wang, L. A. Dorf, G. A. Wurden,
A Plasmadynamic Hypervelocity Dust Injector for the National Spherical Torus Experiment,
Review of Scientific Instruments 77, 10E304 (2006).

- [16] **C.M. Ticoş**, M. Bulinski, R. Andrei, M. L. Pascu,
Power drop-out control by optical phase modulation in a chaotic semiconductor laser,
Journal of the Optical Society of America B 23, 2486, (2006).
- [15] **C. M. Ticoş**, Z. Wang, G. L. Delzanno, G. Lapenta
Plasma dragged microparticles as a method to measure plasma flows,
Physics of Plasmas 13, 103501 (2006).
- [14] L. A. Dorf, A. L. Roquemore, G. A. Wurden, **C. M. Ticoş**, Z. Wang
Imaging system for hypervelocity dust injection diagnostic for NSTX,
Review of Scientific Instruments 77, 10E517 (2006).
- [13] Z. Wang, **C. M. Ticoş**, L. A. Dorf, G. A. Wurden,
Micro-particle Probes for Laboratory Plasmas,
IEEE Transactions on Plasma Science 34, 242 (2006).
- [12] **C. M. Ticoş**, P. W. Smith,
Dusty Plasmas and a Review of the Research at Oxford University,
Jurnal Fizik Malaysia, 27 (1), 1-7 (2006).
- [11] **C. M. Ticoş**, A. Dyson, P.W. Smith, P. K. Shukla,
Pressure triggered collective oscillations of a dust crystal in a capacitive RF plasma,
Plasma Physics and Controlled Fusion 46, B293 (2004).
- [10] **C. M. Ticoş**, A. Dyson, P. W. Smith,
The Charge on Falling Dust Particles in a RF Discharge with DC Negative Bias,
Plasma Sources Science and Technology 13, 395 (2004).
- [9] **C. M. Ticoş**, P. W. Smith, P. K. Shukla,
Oscillations of Dust Particles Due to Wake Fields: An Experimental Demonstration,
Physica Scripta T107, 117 (2004).
- [8] **C. M. Ticoş**, P. W. Smith, P. K. Shukla,
Experimental Wake-Induced Oscillations of Dust Particles in a RF Plasma,
Physics Letters A 319, 504 (2003).
- [7] E. Rosa, Jr., **C. M. Ticoş**, W. B. Pardo, J. Walkenstein, M. Monti, J. Kurths,
Experimental Chua-Plasma Phase Synchronization of Chaos,
Physical Review E 68, 025202(R) (2003).
- [6] W. B. Pardo, E. Rosa, Jr., **C. M. Ticoş**, J. Walkenstein, M. Monti,
Pacing a Chaotic Plasma with a Music Signal,
Physics Letters A 284, 259-265 (2001).
- [5] **C. M. Ticoş**, E. Rosa, Jr., W. B. Pardo, J. Walkenstein, M. Monti,
Experimental Real Time Phase Synchronization of a Paced Chaotic Plasma Discharge,
Physical Review Letters 85, 2929 (2000).
- [4] E. Rosa, Jr., W. B. Pardo, **C. M. Ticoş**, J. Walkenstein, M. Monti,
Phase Synchronization of Chaos in a Plasma Discharge Tube,
International Journal of Bifurcation and Chaos in Applied Sciences and Engineering 10, 2551 (2000).
- [3] F. Bertinetto, **C. M. Ticoş**, M.L. Pascu, C. Biloiu, Angela M. Dumitras,
Experimental Tunable Semiconductor Lasers,
Romanian Reports in Physics 49, 811 (1997).
- [2] E. Barna, V. Covlea, M. Bazavan, C. Biloiu, **C. M. Ticoş**,
Ionization Waves in the Medium Pressure Helium and Neon Plasma,
Fizika A6, 131-138 (1997).
- [1] G. Musa, I. Mustata, A. Popescu, G. Bajeu, **C. M. Ticoş**, A. Salabas, R. Breban, G.F. Leu,
Preliminary Results on the Oscillatory Behavior of the Thermionic Vacuum Arc (TVA) in the Range of Negative Slope of the Current-Voltage Characteristic,
Romanian Reports in Physics 48, 707 (1996).

Articole prezentate la conferințe internaționale

- [16] C. P. Lungu, **C. M. Ticoș**, C. Porosnicu, I. Jepu, M. Lungu, P. Dinca, O. Pompilian, B. Butoi, D. Ursescu, R. Banici, G. Cojocaru, R. Ungureanu, C. Luculescu, A. Marcu, A. Marin, P. Osiceanu, I. Feraru, C. Grigorescu
Plasma plume analysis and the effect of terawatt laser system irradiation on C, W layers
Proceedings of the 32nd ICPIG, July 26-31, pp. 1-3 (2015), Iasi, Romania
- [15] **C. M. Ticoș**, D. Toader, A. Scurtu, T. Chereches, P. Lixandru
Dust removal from surfaces in a low pressure environment
Proceedings of the 41st EPS Conference on Plasma Physics, O4J105-1/4, Berlin, 23 - 27 June 2014,
- [14] I. R. Andrei, G. V. Popescu, **C. M. Ticoș**, M. L. Pascu
Optical Spectrum Analysis of Chaotic Synchronization in a Bidirectional Coupled Semiconductor Laser System,
Proceedings of the 4th International Interdisciplinary Chaos Symposium, Editors: S.G Stavrinides, S. Banerjee, S.H. Caglar, M. Ozer, Chaos and Complex Systems, pp 425-429 (2013).
- [13] D. Toader, M. Oane, I. N. Mihailescu, **C. M. Ticoș**, N. Serban, C. Ristoscu, K. Vutova, G. Georgescu, V. Donchev,
Beam Dynamics: A New Computational Approach
Electrotehnica & Electronica Conference Proceedings, pp 33-35
Tenth Anniversary International Conference on Electron beam Technologies, Varna, Bulgaria 1-4 June 2012,
- [12] **C. M. Ticoș**, Z. Wang,
Dust accelerators and their Applications in High Temperature Plasmas,
AIP Conference Proceedings 1336, 26 (2011).
- [11] **C. M. Ticoș**,
Experiments with a RF Dusty Plasma and an External Plasma Jet,
AIP Conference Proceedings 1306, 180 (2010).
- [10] **C. M. Ticoș**, I. Jepu, C. P. Lungu, P. Chiru and V. Zaroschi,
Dust Particles Interaction with plasma Jet,
AIP Conference Proceedings 1188, pg 74-82 (2009).
- [9] **C. M. Ticoș**, Z. Wang, G. A. Wurden, P. K. Shukla,
Observation of Hypervelocity Dust in Dense Supersonic Plasma Flows: Physics and Applications,
AIP Proceedings 1061, 112 (2008).
- [8] **C. M. Ticoș**, C. P. Lungu, C. Surdu-Bob, I. Mustață, V. Zaroschi, A. Anghel, C. Porosnicu,
Deposition of magnetic materials on dust particles levitated in vacuum arc plasmas,
EPS 2008 Proceedings, Book of Abstracts.
- [7] **C. M. Ticoș**, Z. Wang, G. A. Wurden,
A New Parameter Regime for Dust in Plasma: the Case of Dense and Supersonic Plasma Flow,
AIP Proceedings 1041, 135 (2008).
- [6] Z. Wang, D. K. Mansfield, L. A. Roquemore, **C. M. Ticoș**, G. A. Wurden,
Applications and Progress of Dust Injection to Fusion Technology,
AIP Proceedings 1041, 135 (2008).
- [5] Z. Wang, C.H. Skinner, G.L. Delzanno, S.I. Krasheninnikov, G.M. Lapenta, A. Yu. Pigarov, P.K. Shukla, R.D. Smirnov, **C. M. Ticoș**, W. P. West,
Physics of Dust in Magnetic Fusion Devices,
New Aspects of Plasma Physics, Proceedings of the 2007 ICTP Summer College on Plasma Physics Abdus Salam International Centre for Theoretical Physics, Trieste, Italy 30 July - 24 August 2007, p. 394-475, World Scientific (2008).
- [4] **C. M. Ticoș**, Z. Wang, G. A. Wurden,
Hypervelocity Dust Storm Launched with a Coaxial Plasma Gun,
16th IEEE International Pulsed Power Conference, Digest of Technical Papers, p. 1106-1109 (2007).

- [3] M. Bulinski, **C.M. Ticoș**, R. Andrei,
M:N Synchronization of LFF in a Chaotic ECSL System,
Proceedings of SPIE 6603, 660329/1-9 (2007).
- [2] E. Rosa, Jr., **C. M. Ticoș**, W. B. Pardo, J. Walkenstein, M. Monti, J. Kurths,
Phase Synchronization in a Plasma Discharge Driven by a Chaotic Signal,
AIP Conference Proceedings 676, 301 (2003).
- [1] M.L. Pascu, B. Carstocea, G. Popescu, L. Gafencu, S. Apostol, N. Moise, M. Roman, **C. M. Ticoș**,
Laser Method for Corneal Structure Investigation,
Proceedings of SPIE 3405, 665 (1997).

Cătălin Mihai Ticoș
12 Sept. 2019