List of publications

Lénaïc COUËDEL

75 publications in peer-reviewed journals since 2006 including 6 articles in Physical Review Letters (3 as lead author)
1 co-authored graduate textbook.

1 Co-authored book

1. N. Sator, N. Pavloff and L. Couëdel, "Statistical Physics", (CRC Press: Boca Raton, FL, 2023)

2 Articles in peer-reviewed journals

1. J.-H. Mun, M. Muraglia, O. Agullo, C. Arnas, and L. Couëdel, "Origin and impact of ion heating in the cathode sheath of direct-current argon discharges at moderate pressures", Phys. Plasmas **31**, 073906 (2024)

2. J. Beckers, J. Berndt, D. Block, M. Bonitz, P.J. Bruggeman, L. Couëdel et al., "Physics and applications of dusty plasmas: The perspectives 2023", Phys. Plasmas **30**, 120601 (2023)

3. R. Banka, K. Vermillion, L. Matthews, T. Hyde, and L. Couëdel , "Evolution of Ion Wake Characteristics with Experimental Conditions", Plasma Phys. Control. Fus. **65**, 044006 (2023)

4. C. A. Knapek, L. Couëdel, A. Dove, J. Goree, U. Konopka, A. Melzer, S. Ratynskaia, M. Thoma,H. M. Thomas,"COMPACT - A new complex plasma facility for the ISS", Plasma Phys. Control. Fus. **64**, 124006 (2022)

5. L. Couëdel,"Tempporal dusty plasma afterglow: A review", Frontiers in Physics **10**, Special Issue: *Particle Interaction With Afterglow Plasma and Non-Quasi-Neutral Plasma* (Editor: John Goree), 1015603 (2022)

6. C. Arnas,T. Guidez,A. Chami, J. H. Mun, and L. Couedel, "Forces applied to nanoparticles in magnetron discharges and the resulting size segregation", Physics of Plasmas **29**, 073703 (2022)

7. N. Nelson, L. Couëdel, and C. Xiao, "Design and Characterization of a Dust Dispenser for Tungsten Dust Injection Experiments in the STOR-M Tokamak", Radiation Effects and Defects in Solids **177**, 181 (2022)

8. L. Couëdel and V. Nosenko, "Stability of two-dimensional complex plasma monolayers in asymmetric capacitively-coupled radio-frequency discharges", Review E **105**, 015210 (2022)

9. J. Moreno, A. Khodaee, D. Okerstrom, M. P. Bradley, and L. Couëdel, "Time-resolved evolution of plasma parameters in a plasma immersion ion implantation source" Phys. Plasmas 28, 123523 (2021)

10. A. Tavassoli1, O. Chapurin, M. Jimenez, M. Papahn Zadeh, T. Zintel, M. Sengupta, L. Couëdel, et al. "The role of noise in PIC and Vlasov simulations of the Buneman instability", Phys. Plasmas 28, 122105 (2021)

11. S. Mitic, J. Moreno, C. Arnas and. L. Couëdel "Diagnostics of a high-pressure DC magnetron argon discharge with an aluminium cathode" Eur Phys. J. D **75**, 240 (2021)

12. X. Yang, D. Kogut, L. Couëdel, et al. "TALIF measurements of hydrogen and deuterium surface loss probabilities on quartz in low pressure high density plasmas", Plasma Sources Sci. Technol. **30**, 015013 (2020)

13. S. Khrapak and L. Couëdel. "Dispersion relations of Yukawa fluids at weak and moderate coupling", Physical Review E **102**, 033207 (2020)

14. M. Menati, T. Hall, B. Rasoolian, L. Couëdel et al. "Experimental observation and numerical investigation of imposed pattern formation in magnetized plasmas by a wide wire mesh", Plasma Sources Sci. Technol. **29**, 085015 (2020)

15. A. Smolyakov, T. Zintel, L. Couëdel, et al. "Anomalous electron transport in one-dimensional Electron Cyclotron Drift Turbulence", Plasma Physics Reports **46**, 496 (2020)

16. C. Pardanaud, D. Dellasega, M. Passoni, C. Martin, P. Roubin, Y. Addab, C. Arnas, L. Couëdel et al. "Post-mortem analysis of tungsten plasma facing components in tokamaks: Raman microscopy measurements on compact, porous oxide and nitride films and nanoparticles", Nucl. Fusion **60**, 086004 (2020)

17. V Pigeon, M. Muraglia, C. Arnas, N. Claire and L. Couëdel. "Evaluating the uncertainty for a complex experiment:the case of the plasma potential measurement", European Journal of Physics, **41**, 035806 (2020)

18. S. Jaiswal, M. Menati, L. Couëdel, et al. "Effect of growing nanoparticle on the magnetic field induced filaments in a radio-frequency Ar/C2H2 discharge plasma", Japanese Journal of Applied Physics, **59** SHHC07 (2020)

19. C. Arnas, A. Chami, L. Couëdel, et al. "Thermal balance of tungsten monocrystalline nanoparticles in high pressure magnetron discharges", Phys. Plasmas **26**, 053706 (2019)

20. L. Couëdel and V. Nosenko. "Tracking and Linking of Microparticle Trajectories During Mode- Coupling Induced Melting in a Two-Dimensional Complex Plasma Crystal", Journal of Imaging, **5**(3), 41 (2019)

21. K. Ouaras, G. Lombardi, L. Couëdel, et al. "Microarcing-enhanced tungsten nano and micro-particles formation in low pressure high-density plasma", Phys. Plasmas **26**, 023705 (2019)

22. L. Couëdel, D. Artis, M. P. Khanal, et al. "Influence of magnetic field strength on nanoparticle growth in a capacitively-coupled radio-frequency Ar/C2H2 discharge. Plasma Research Express, **1**(1), 015012 (2019)

23. L. Couëdel, V.M. Nosenko, S. Zhdanov et al. "Experimental studies of two-dimensional complex plasma crystals: waves and instabilities" Physics-Uspekhi, **62**(10), 1000 (2019)

24. N. P. Kryuchkov, E. V. Yakovlev, E. A. Gorbunov, L. Couëdel, et al. (2018). "Thermoacoustic Instability in Two-Dimensional Fluid Complex Plasmas", Physical Review Letters **121**, 075003 (2018)

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27. S.Khrapak, B. Klumov, L. Couëdel "Self-diffusion in single-component Yukawa fluids", J. Phys. Commun. **2**, 045013 (2018)

28. S. Mitic, S. Coussan, C. Martin,and L. Couëdel "Hydro-carbon material design in a capacitively coupled radio-frequency discharge", Plasma Processes and Polymers **15** 1700152 (2018)

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30. N. Ning, L. Couëdel, C, Arnas, and S. Khrapak. "Computational Prediction of Rate Constant for Reactions Involved in Al Clustering", Journal of Physical Chemistry A, **121** (2017)

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32. S. Khrapak, B. Klumov, and L. Couëdel, "Collective modes in simple melts: Transition from soft spheres to the hard sphere limit", Scientific Reports **7**, 7985 (2017)

33. C. Arnas, J. Irby, S. Celli, G. D. Temmerman, Y. Addab, L. Couëdel, et, al. "Characterization and origin of large size dust particles produced in the Alcator C-Mod tokamak", Nuclear Materials and Energy, **11**, 12-19 (2017)

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