Anne Bourdon - Publication list and invited conferences up to march 2026

Publication list

116. V. P. Pasko, S. Celestin, A. Bourdon, Relativistic Feedback Discharges in Dielectric Solids, *Physical Review Letters* 136, 095301 (2026)

115. F. Petronio, A. Alvarez Laguna, A. Bourdon, T. Lafleur, P. Chabert, Hall thruster modeling with multiple simulation techniques : Model benchmarking, fluid-kinetic consistency, and experimental validation, *Journal of Applied Physics* 139, 093303 (2026)
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114. A.T. Powis, E. Ahedo, A. Alvarez Laguna, N. Barléon, E. Bello-Benitez, L. Beving, J.-P. Boeuf, G. Bogopolsky, A. Bourdon, F. Cichocki, B. Cuenot, A. Denig, Z. Donko, P.-Q. Elias, M. P. Encinar, D. Eremin, P. Fajardo, F. Faraji, G. Fubiani, L. Garrigues, K. Hara, P. Hartmann, M. Hopkins, I. D. Kaganovich, A. Knoll, G. Lapenta, T. E. Magin, A. Marin-Cebrian, M. Merino, P. Minelli, M. P. Zadeh, P. Parodi, F. Petronio, M. Reza, A. I. Smolyakov, D. Sydorenko, F. Taccogna, M. M. Turner, O. Vermorel, W. Villafana, L. Xu, Benchmark for two-dimensional large scale coherent structures in partially magnetized EXB plasmas - community collaboration & lessons learned, *Plasma Sources Science and Technology* 35, 025002 (2026)

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Invited talks in conferences

30. A. Bourdon, On the coupling of neutral and low-temperature magnetized plasma flows in Hall-effect thrusters, Irving Langmuir Plenary Lecture at the *33rd International Symposium on Rarefied Gas Dynamics (RGD33)*, Goettingen, Germany, july 15-19, 2024
29. A. Bourdon, Why are 2D axisymmetric ionization waves generated in a simple point to plane geometry in atmospheric pressure air still studied ?, invited lecture at the special session on transient plasma at the *International Conference on Phenomena in Ionized Gases ICPIG XXXV*, Egmond aan See, The Netherlands, july 9-14 2023
28. A. Bourdon, Benjamin Esteves, Nicolas Lequette, Alejandro Alvarez-Laguna, Cyril Drag and Pascal Chabert Chemistry of low pressure iodine plasmas, invited lecture at the *Annual Gaseous Electronics Conference*, Sendai, Japan, october 3-7, 2022
27. A. Bourdon, P. Viegas, Z. Bonaventura, Recent advances in modeling low-temperature kHz atmospheric pressure plasma jets and their interactions with surfaces invited lecture at the *Workshop "plasma modelling", 74th Annual Gaseous Electronics Conference* Virtual, october 4, 2021
26. A. Bourdon, Current Modeling and Simulation Challenges of Low-Temperature Plasmas invited lecture at the *67th AVS*, Virtual, October 24-29, 2021
25. A. Bourdon, The electron Boltzmann equation in a wider context, invited lecture at the *Modelling workshop "All about the Boltzmann equation"*, DIFFER, Eindhoven, The Netherlands, december 2, 2019,
24. A. Bourdon, Current challenges in the modeling and validation of PIC and fluid simulations for low-temperature plasmas, invited lecture at the *Workshop on Modeling and validation of the 2019 Gaseous electronic conference*, College station, Texas, USA, october 28, 2019
23. A. Bourdon, The potential of electric and plasma propulsion for medium and long-term planetary exploration : research at LPP and in the Poseidon industrial chair, invited lecture at the *synthesis workshop "Horizon 2061"*, Toulouse, France, september 11-13, 2019
22. A. Bourdon, P. Viegas, A. Obrusnik, Z. Bonaventura, Modeling of low-temperature plasma jets at atmospheric pressure, Topical invited lecture at the *XXXIV International Conference on Phenomena in Ionized Gases (ICPIG) and 10th International Conference on Reactive Plasmas (ICRP-10)*, Sapporo, Japan, july14-19, 2019
21. A. Bourdon, Challenges in the modeling and the simulation of low-temperature plasmas, Plenary lecture at the *24th International Symposium on Plasma Chemistry (ISPC 24)*, Naples, Italy, june 9-14, 2019
20. A. Bourdon, Fluid modeling and simulation of atmospheric pressure discharges : application to plasma-assisted combustion and plasma jets, "journée thématique" cold plasmas, IMFT, Toulouse, France, june 6, 2019
19. A. Bourdon, Barrier discharge and pulsed discharge modelling, *16th International Symposium on High Pressure Low Temperature Plasma Chemistry (HAKONE XVI)*, Tsinghua University, Beijing, China, september 2-7, 2018
18. A. Bourdon, Challenges in the modeling and the simulation of low-temperature plasma discharges, *Gordon Research Conference (GRC) on "Fundamental Insights in Plasma Processes"*, Bryant University, Smithfield, R.I., USA, august 5 - 10, 2018

17. A. Bourdon, Modeling and simulation of low-temperature plasma discharges, General lecture at the *24th Europhysics Conference on the Atomic and Molecular Physics of Ionised Gases (ESCAMPIG)*, Glasgow, U.K., july 17-21 2018
16. A. Bourdon, Why always more efficient and accurate methods to solve Poisson's equation are needed for electrostatic PIC and fluid plasma simulations ? *Plas@par scientific day 2018*, Pierre et Marie Campus, Paris, France, february 9, 2018
15. A. Bourdon Simulation of nanosecond spark discharges for plasma assisted combustion applications, Plenary lecture at the *44th International Conference on Plasma Science (ICOPS)*, Atlantic City, USA, may 21-25, 2017
14. A. Bourdon, S. Kobayashi, Z. Bonaventura, F. Tholin, N. Popov, Study of nanosecond discharges in different H_2/air mixtures at atmospheric pressure for plasma-assisted applications, *Kaust Research Conference on New Combustion Concepts*, King Abdullah University of Science and Technology (KAUST) Thuwal, Saudi Arabia, march 6-8, 2017
13. A. Bourdon, 2D fluid simulations of discharges at atmospheric pressure in reactive gas mixtures, *68th Annual Gaseous Electronics Conference (GEC)*, Honolulu, USA, october 12-16, 2015
12. A. Bourdon, Dynamics and structure of atmospheric pressure discharges in capillary tubes, *20th International Colloquium on Plasma Processes (CIP)*, Saint Etienne, France, June1-5, 2015
11. A. Bourdon, Fluid simulations for atmospheric pressure low-temperature plasmas, *Workshop on the Exploration of Low Temperature Plasma Physics (WELTPP-17)*, Rolduc, Kerkrade, The Netherlands, november 20-21, 2014
10. A. Bourdon, F. Tholin, Modelling of nanosecond repetitively pulsed discharges, *41st European Physical Society (EPS) conference on Plasma Physics*, Berlin, Germany, June 23-27, 2014
9. A. Bourdon, F. Pechereau, P. Viegas and J. Jansky, Simulation of atmospheric pressure helium discharges in capillary tubes and in plasma jets, *5th International Conference on Plasma Medecine (ICPM)*, Nara, Japan, may 18-23, 2014
8. A. Bourdon, Fluid simulations for atmospheric pressure low-temperature plasmas, *International Conference on "Progress in numerical simulations for plasmas : Methods and Results"* organized by the Labex Plas@Par, Paris, France, march 27, 2014
7. A. Bourdon J. Jansky, F. Péchereau and F. Tholin, Dynamics and structure of discharges in thin dielectric tubes in air and in helium at atmospheric pressure *7th international workshop on microplasmas (IWM)*, Beijing, china, May 20-23, 2013
6. A. Bourdon, Simulations of atmospheric pressure discharges in thin dielectric tubes : application to plasma jets, *IOP Plasma Physics Group Spring Conference*, St Hugh's College, University of Oxford, Oxford, U.K., april 2-5 2012
5. A. Bourdon, Modeling of streamer propagation, topical lecture at the *29th International Conference on Partially Ionized Gases(ICPIG)*, Cancun, Mexico, july 12-17 2009
4. A. Bourdon, Plasma assisted combustion using nanosecond repetitively pulsed discharges, *Gordon Research conference (GRC) on Plasma Processing Science*, Mount Holyoke College, South Hadley, MA, USA, July 13-18, 2008

3. A. Bourdon, P. Ségur, Streamer simulation in air at atmospheric pressure, *Workshop on Streamers, sprites, leaders, lightning : from micro- to macroscales*, Leiden, The Netherlands, october 8-12 2007
2. A. Bourdon, P. Ségur, Numerical modeling of filamentary dielectric barrier discharges in nitrogen taking into account metastable states, *Workshop on the multiscale nature of spark precursors and high altitude lightning*, Leiden, The Netherlands, may 9-13 2005
1. A. Bourdon, Experimental and numerical studies carried out at CORIA, IUSTI and in Russia, *NASDA-NAL/CNES Workshop on catalycity*, Kakuda, Japan, february 2000