

*Antoine Rousseau publication list 1994-2010*

**Microwave discharge in H<sub>2</sub>: influence of H-atom density on the power balance,**

A Rousseau, A Granier, G Gousset and P Leprince

*J. Phys. D: Appl. Phys.* **27** (1994) 1412-1422

**Detection of H atoms in the flowing afterglow of a H<sub>2</sub> microwave plasma by multiphoton laser-induced fluorescence: atom-removal kinetics,**

J Deson, F Haloua, C Lalo, A Rousseau and V Veniard

*J. Phys. D: Appl. Phys.* **27** (1994) 2320-2328

**Pulsed microwave discharge: a very efficient H atom source,**

A Rousseau, L Tomasini, G Gousset, C Boisse-Laporte and P Leprince

*J. Phys. D: Appl. Phys.* **27** (1994) 2439-2441

**Spectroscopic temperature measurements in a H<sub>2</sub> microwave discharge,**

L Tomasini, A Rousseau, G Gousset, P Leprince,

*J. Phys. D: Appl. Phys.* **29** (1996) 1006-1013

**Laser induced stimulated emission for H atom density measurements in a pulsed microwave discharge,**

L Tomasini, A Rousseau, G Baravian, G Gousset, P Leprince,

*Appl. Phys. Lett.* **69** (1996) 1553-1555

**Time resolved temperature measurements in a H<sub>2</sub> high power pulsed discharge**

A Rousseau, E Teboul, P Leprince

*J. Phys. IV* (1998) Pr 7- 287

**On the influence of the gas velocity on dissociation degree and on gas temperature in a flowing hydrogen discharge**

P Chabert, A Rousseau, G Gousset, P Leprince

*J. Appl. Phys* **84**, N°1, (1998) 161.

**Rotational temperature measurements of excited and ground states of C<sub>2</sub> in a H<sub>2</sub>/CH<sub>4</sub> 915 MHz microwave pulsed plasma**

X Duten, A. Rousseau, A Gicquel, P Leprince

*J. Appl. Phys* **86**, N°9 (1999), 5299

**Time resolved LIF study of NO removal plasma technology in N<sub>2</sub>/NO mixtures**

F. Fresnet, G. Baravian, S. Pasquiers, C. Postel, V. Puech, A. Rousseau, M. Rozoy

*J. Phys. D: Appl. Phys.*, **33** (2000) 1315-1322

**Kinetic of NO removal by non thermal plasma in N<sub>2</sub>-C<sub>2</sub>H<sub>4</sub>-NO mixtures**

F. Fresnet, G. Baravian, L. Magne, S. Pasquiers, C. Postel, V. Puech, A. Rousseau

*Appl. Phys. Lett* **77** (2000) 4118-4120

**Investigation of chemical kinetics and energy transfer in a pulsed microwave H<sub>2</sub>/CH<sub>4</sub> plasma**

K Hassouni, X. Duten, A. Rousseau, A. Gicquel and M. H. Gordon

*Plasma Sources Sci. Technol.* **10** (2001) 61

**Surface recombination of hydrogen atoms studied by a pulsed plasma excitation technique**

A Rousseau, G Cartry and X Duten,

*J. Appl. Phys.* **89** (2001) 2074-78

**On the hydrocarbon chemistry in a H<sub>2</sub> surface wave discharge containing methane**

L Mechold, J Röpcke, X. Duten, A. Rousseau,  
*Plasma Sources Sci. Technol.* **10** (2001) 52

**A time resolved laser study of hydrocarbon chemistry in H<sub>2</sub>-CH<sub>4</sub> surface wave plasmas**

J Röpcke, L Mechold, X Duten and A Rousseau,  
*J. Phys. D: Appl. Phys.* **34** (2001) 2336-2345

**Spatially resolved gas temperature measurements by Rayleigh scattering in a microwave discharge.**

A. Rousseau, E Teboul, M.J. v. d. Sande, J.A.M. v.d. Mullen.  
*Plasma Sources Sci. Technol* (2002) **11** 47-52

**Influence of water on NO removal by pulsed discharge in N<sub>2</sub>/H<sub>2</sub>O/NO mixtures,**

F. Fresnet, G. Baravian, L. Magne, S. Pasquiers C. Postel, V. Puech, A. Rousseau  
*Plasma Sources Sci. Technol* **11** (2002) 152-160

**Langmuir probe diagnostics studies of pulsed hydrogen plasmas in planar microwave reactor**

A. Rousseau, E. Teboul, N. Lang, M. Hannemann and J. Röpcke  
*J. Appl. Phys* **2002** 92 (2002) 3463-3471

**Time-resolved measurements of the gas temperature in a H<sub>2</sub>/CH<sub>4</sub> medium pressure microwave 915 MHz pulsed plasma**

Xavier Duten, Antoine Rousseau, Alix Gicquel, Khaled Hassouni and Philippe Leprince  
*J. Phys. D: Appl. Phys* **35** (2002) 1939-1945

**TOBI : a two laser beam infrared system for time resolved plasma diagnostics,**

J.B. Mc Manus, D. Nelson , M. Zahniser, L. Mechold, M. Osias, J. Röpcke, A. Rousseau  
*Rev. Sci. Inst.* **74** (2003) 2709

**Effect of pulsed microwave plasma on diamond deposition**

G. Lombardi, X. Duten, K. Hassouni, A. Rousseau, A. Gicquel  
*J. Electro. Chem. Soc* **150** (2003) 311

**New driving parameters for diamond deposition reactor : pulsed mode versus continuous mode**

A. Gicquel, K. Hassouni, G. Lombardi, X. Duten, A. Rousseau  
*Materials Research*, **6** (1), 25 (2003)

**Time resolved gas temperature measurements by laser absorption in a pulsed microwave hydrogen discharge**

A. Rousseau, E. Teboul and N. Sadeghi,  
*Plasma Sources Sci. Technol.* **13** (2004) 166–176

**Dynamics of the gas heating in a pulsed microwave nitrogen discharge at intermediate pressures,**

Yu B Golubovskii, R V Kozakov, V A Maierov, A V Meshchanov, I A Porokhova, A Rousseau  
*J. Phys. D. : Appl. Phys.* **37** (2004) 868 - 874

**Oxidation of 2-heptanone in air by a DBD-type plasma generated within a honeycomb monolith supported Pt-based catalyst**

C. Ayrault, J. Barrault , N. Blin-Simiand, F. Jorand, S. Pasquiers, A. Rousseau, J.M. Tatibouet,  
*Catalysis Today* **89** (2004) 75–81.

**Combination of pulsed microwave plasma and catalysis for VOC oxidation ,**

A. Rousseau, O. Guaitella, J. Röpcke, L. V. Gatilova, Y. A. Tolmachev  
*Appl. Phys. Let* **85**(2004) 2199-2201

**On NO<sub>x</sub> production and volatile organic compound removal in a pulsed microwave discharge in air**

A. Rousseau, A. Dantier, L. Gatilova, Y. Ionikh, J. Röpcke, Y Tolmachev  
*Plasma Sources Sci. Technol.* **14** (2005) 70-75

**Plasma-photocatalyst interaction: production of oxygen atoms in a low pressure discharge**

O. Guaitella, L. Gatilova, A. Rousseau  
*Appl. Phys. Lett.* **86**, 151502 (2005)

**Photocatalytic degradation of acetylene over various titanium dioxide based photocatalysts**

F. Thevenet, O. Guaitella, J.M. Herrmann, A. Rousseau, C. Guillard  
*Applied catalysis B: Environmental*, 61 62–72 (2005)

**NO and NO<sub>2</sub> production in pulsed low pressure DC discharge.**

A. Rousseau, L. Gatilova, J. Röpcke, A. V. Meshchanov, Y. Ionikh  
*Appl. Phys. Lett* **86**, 211501 (2005)

**Comparison between Langmuir probe and microwave auto-interferometry measurements at intermediate pressure in an argon surface wave discharge**

A. Rousseau, E. Teboul and S. Bechu  
*J. Appl. Phys.* **98**, 083306 (2005)

**Photocatalyst activation in a pulsed low pressure discharge**

A. Rousseau, O. Guaitella, L.V. Gatilova, C. Guillard, F. Thevenet, J. Röpcke, G. Stancu  
*Appl. Phys. Let.* **87**, 221501 (2005)

**Evidence of plasma-catalyst synergy in a pulsed low pressure discharge,**

A. Rousseau, J. Röpcke, A. V. Meshchanov, Y. Ionikh  
*Appl. Phys. Let* **88**, 021503 (2006)

**A Diode Laser study and modeling of NO and NO<sub>2</sub> formation in a pulsed DC air discharge**

Y. Ionikh, A. V. Meshchanov, J. Röpcke, A. Rousseau  
*Chemical Physics*, **322**, 411-422 (2006)

**Application of Infrared Tuneable Diode Laser Absorption Spectroscopy for Plasma Diagnostics: A Review**

J Röpcke, G Lombardi, A Rousseau and P B Davies  
*Plasma Sources Sci. Technol.* **15** (2006), S148-S168

**Self-pulsing microplasma at medium pressure range in argon**

A. Rousseau and X. Aubert  
*J. Phys.D : Appl. Phys.* **39** (2006) 1619–1622

**Atomic surface loss probability on silica in a a microwave plasma studied by a pulsed induced fluorescence technique**

G. Cartry, X. Duten and A. Rousseau  
*Plasma Sources Sci. Technol.* **15** (2006) 479–488.

**Dynamic of the plasma current amplitude in a barrier discharge : influence of TiO<sub>2</sub> as a photocatalytic material**

O. Guaitella, F. Thevenet, C. Guillard, A. Rousseau  
*J. Phys. D: Appl. Phys.* **39** (2006) 2964–2972.

**Oxidation of acetylene by photocatalytic process coupled with dielectric barrier discharge**

F. Thevenet, O. Guaitella, E. Puzenat, C. Guillard, J.-M. Herrmann, A. Rousseau  
*Catalysis Today* **122** (2007) 186–194.

**Analysis of the self-pulsing operating mode of a microdischarge.**

Xavier Aubert, Gerard Bauville, Jean Guillon, Bernard Lacour, Vincent Puech and Antoine Rousseau  
*Plasma Sources Sci. Technol.* **16** (2007) 23–32

**NO formation mechanisms studied by infrared laser absorption during a single low pressure plasma pulse**

L. V. Gatilova, K. Allegraud, J. Guillon, Y. Z. Ionikh, G. Cartry, J. Röpcke and A. Rousseau  
*Plasma Sources Sci. Technol.* **16** (2007) S107–S114

**Measurement of the C<sub>2</sub>H<sub>2</sub> destruction kinetic by infrared laser absorption spectroscopy in a pulsed low pressure DC discharge.**

A. Rousseau, O. Guaitella, L. Gatilova, M. Hannemann, J. Röpcke  
*J. Phys. D: Appl. Phys.* **40** (2007) 2018–2025 doi:10.1088/0022-3727/40/7/025

**Comparison of the plasma-photocatalyst synergy at low and atmospheric pressure**

F. Thevenet, O. Guaitella, C. Guillard, E. Puzenat, G. Stancu and J. Röpcke and A. Rousseau  
*International Journal of Plasma Environmental Science and Technology*, **1**, (2007), 52–56.

**Time resolved study of a pulsed DC discharge using quantum cascade laser absorption spectroscopy: NO and gas temperature kinetics**

S Welzel, L Gatilova, J Röpcke and A Rousseau  
*Plasma Sources Sci. and Technol.* **16** (2007) 822–831 doi:10.1088/0963-0252/16/4/018

**Spatio-temporal breakdown in surface DBDs: evidence of collective effect,**

K. Allegraud, O. Guaitella, A. Rousseau  
*J. Phys. D: Appl. Phys.* **40** (2007) 7698–7706, doi:10.1088/0022-3727/40/24/017

**Kinetic and Diagnostic Studies of Molecular Plasmas Using Laser Absorption Techniques**

S Welzel, A Rousseau, P B Davies and J Röpcke  
*J. Phys.: Conf. Ser.* **86** (2007) 012012

**C<sub>2</sub>H<sub>2</sub> oxidation by plasma/TiO<sub>2</sub> combination: photocatalysis aided by plasma and porosity effect**

O. Guaitella, F. Thevenet, E. Puzenat, C. Guillard, A. Rousseau  
*Applied Cata. B.* **80** (2008) 296–305.

**Patterns of Plasma Filaments Propagating on a Dielectric Surface**

Sébastien Célestin, Katia Allegraud, Grégoire Canes-Boussard, Noémi Leick, Olivier Guaitella, and Antoine Rousseau  
*IEEE Transaction On Plasma Science*, Vol. **36**, (2008) p1326

**Influence of the charges deposition on the spatio-temporal self-organization of streamers in a DBD**

S Celestin, G Canes-Boussard, O Guaitella, A Bourdon and A Rousseau, *J. Phys. D: Appl. Phys.* **41** (2008) 205214

**Diagnostic Studies of Molecular Plasmas Using Mid-Infrared Semiconductor Lasers,**

J. Röpcke, S. Welzel, N. Lang, F. Hempel, L. Gatilova, O. Guaitella, A. Rousseau, P. B. Davies,  
*Appl. Phys. B* **92**, 335–341 (2008) DOI: 10.1007/s00340-008-3094-3.

**Influence of water vapour on plasma/photocatalytic oxidation efficiency of acetylene**

F. Thevenet, O. Guaitella, E. Puzenat, C. Guillard, A. Rousseau  
*Applied Catalysis B: Environmental*, Volume **84**, Issues 3–4, (2008), 813–820

**Self synchronization of surface discharges in a two electrodes device**

K. Allegraud and A. Rousseau  
*IEEE Transaction on Dielectrics and Electrical Insulation*, Volume **16**, (2009), p435–439

**Influence of surface charges on the structure of a dielectric barrier discharge in air at atmospheric pressure: experiment and modeling**

S. Celestin, Z. Bonaventura, O. Guaitella, A. Rousseau, and A. Bourdon  
*Eur. Phys. J. Appl. Phys.* **47**, 22810 (2009) DOI: 10.1051/epjap/2009078

**Heavy species kinetics in low-pressure dc pulsed discharges in air**

[C D Pintassilgo](#), [O Guaitella](#) and [A Rousseau](#)

*Plasma Sources Sci. Technol.* 18 No 2 (May 2009) 025005

**Excitation structure in a Micro Hollow Cathode Discharge in the normal regime at medium argon pressure**

C. Lazzaroni, P. Chabert, A. Rousseau and N. Sadeghi

*J. Phys. D: Appl. Phys.* **43** (2010) 124008

**On electric field measurements in surface dielectric barrier discharge.**

S.M. Starikovskaia, K. Allegraud, O. Guaitella, A. Rousseau

*J. Phys. D: Appl. Phys.* **43** (2010) 124007

**Production of molecule on surface under plasma exposure: example of NO on Pyrex**

D. Marinov, O. Guaitella, A. Rousseau, Y. Ionikh

*J. Phys. D: Appl. Phys.* **43** (2010) 115203

**Time resolved nanosecond imaging of the propagation of a corona-like plasma discharge in water at positive applied voltage polarity**

P. Ceccato, O. Guaitella, M. Rabecq, A. Rousseau

*J. Phys. D: Appl. Phys.* **43** (2010) 175202

**Evidence of atomic adsorption on TiO<sub>2</sub> under plasma exposure and related C<sub>2</sub>H<sub>2</sub> surface reactivity**

O. Guaitella, C. Lazzaroni, D. Marinov, A. Rousseau

*Appl. Phys. Lett.* 97 (2010) , 011502 , doi:10.1063/1.3462295

**Quantum Cascade Laser Absorption Spectroscopy – a New Method to Study Molecular Plasma Components**

J Röpcke, S Glitsch, P Davies, F Hempel, N Lang, A Rousseau, S Wege and S Welzel

*Journal of Physics: Conference Series* 227 (2010) 012005 doi:10.1088/1742-6596/227/1/012005

**Plasma stimulated oxygen atom deposition on a Pyrex surface**

O. Guaitella, M. Hübner, S. Welzel, D. Marinov, J. Röpcke, A. Rousseau

*Plasma Sources Sci. Technol.* **19** (2010) 045026

**Modelling of an afterglow plasma in air produced by a pulsed discharge**

C. D. Pintassilgo, V. Guerra, O. Guaitella and A. Rousseau

*Plasma Sources Sci. Technol.* 2010 *Plasma Sources Sci. Technol.* **19** 055001 doi: [10.1088/0963-0252/19/5/055001](https://doi.org/10.1088/0963-0252/19/5/055001)

**Evidence for surface oxidation on Pyrex of NO into NO<sub>2</sub> by adsorbed O atoms**

O Guaitella, M Hübner, S Welzel, D Marinov, J Röpcke and A Rousseau

*Plasma Sources Sci. Technol.* **19** (2010) 045026 (5pp)

**Sheath and electron density dynamics in the normal and self-pulsing regime of a micro hollow cathode discharge in argon gas**

C.Lazzaroni, P. Chabert, A. Rousseau and N. Sadeghi

*Eur. Phys. J. D* (2010) DOI: 10.1140/epjd/e2010-00259-4