

CURRICULUM VITAE

JEGUIRIM Mejdj

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ACADEMIC QUALIFICATIONS

- HDR Research Energy, University of Haute Alsace, France (*Sep, 2006 – Dec 2011*), Title: “Contribution to the kinetic modelling of heterogeneous reaction during solid fuels degradation.
- Ph.D Environmental Chemistry, University of Haute Alsace, France (*Sep, 2002 – Jul, 2005*)
Thesis Title: “Contribution to the understanding of the oxidation mechanism of Diesel soot by NO₂ in the exhaust gas conditions – Effect of Pt based catalyst”
- Master’s Degree Energy & Environment, University of Besançon (*Oct, 2001 – Jun, 2002*)
- Engineer Energetic Diploma Engineer School of Monastir, (*Sep, 1994 – Jun, 1999*)

PROFESSIONAL EXPERIENCE

- Professor, Faculté des Sciences et Techniques de Mulhouse (*Sep, 2012 up to date*) :Teaching combustion, heating transfer, fluid mechanic and chemistry courses.
- Associate Professor, Faculté des Sciences et Techniques de Mulhouse (*Sep, 2006-August 2012*) :Teaching combustion, heating transfer, fluid mechanic and chemistry courses.
- Assistant Professor, Faculté des Sciences et Techniques de Mulhouse (*Sep, 2005 – Aug, 2006*) :Teaching combustion, heating transfer, fluid mechanic and chemistry courses.
- Research Assistant, Laboratoire Gestion des Risques et Environnement (GRE), (*Sep, 2002 – Jul, 2005*) :Collaborated in the European Program COMET on the understanding of the mechanism of the Soot-NO₂ reaction in absence and presence of catalyst

AWARDS AND HONORS

- National Research Excellence Award for researcher with high level scientific activity in their area of research, Université de Haute Alsace, 2009-2012, 2013-2016 and 2017-2020.

RESEARCH INTEREST

1. **Biomass Valorisation** : Pyrolysis, Gasification and Combustion of different biomasses including agriculture residues and agro-industrial by-products : thermal degradation mechanisms and kinetics, products analysis and recovery.
2. **Heterogen Catalysis, Adsorption, Activated Carbon** : Exhaust gas treatment in fixed sources : Catalytic NO_x and soot abatement, Volatiles Organic Compounds elimination using activated carbon prepared by pyrolysis and activation of biomass residues. Removal of pollutants from aqueous effluents (Dyes, Antibiotic, Heavy Metals).

TEACHING INTEREST

General Chemistry, Process Engineering, Fluid Dynamic, Heat Transfer, Combustion, Biomass Energy, Renewable Energies.

PROFESSIONAL ACTIVITIES

Journal Editorial Activities

- Associate Editor, **Energy for Sustainable Development** Journal (*IF* : 1.993), ISSN: 0973-0826 since *January 2013*.
- Member Editorial Board, **Energy, The International Journal** (*IF* : 4.844), ISSN: 0360-5442 (<http://www.journals.elsevier.com/energy/>) since *January 2015*.
- Member Editorial Board, **Energies** (*IF* : 2.08), ISSN: 1996-1073 (<http://www.mdpi.com/journal/energies/>) since *June 2016*.
- Member Editorial Board **Biofuels**, Taylor and Francis, ISSN: 1759-7269 :IF: 0.78 (since 01/2017)

Reviewer for 40 different journals including : Energy, Bioresource Technology, BioEnergy Research, Fuel, Renewable Energy, Energy & Fuel, Applied Catalysis B, Desalination, Chemical Engineering Journal, Industrial & Engineering Chemistry Research, International Journal of Green Energy, Chemical Engineering Research Design, Journal of Hazardous Materials, Thermochemica Acta, Energy Conversion and Management, International Journal of Energy Engineering, Industrial Crops and Products, Environmental Engineering and Management Journal, Fire Safety Journal, Comptes Rendus Chimie, International Journal of Chemical Reactor and Design, Journal of Industrial and Engineering Chemistry, Environmental Science and Technology, Catalysis Communications, Journal of Colloids and Surfaces, Polish Journal of Chemical Technology, British Journal of Applied Science & Technology, Plos One, Environmental Progress and Sustainable Energy, Korean Journal of Chemical Engineering

Scientific Expert for projects submitted in the frame of :

- Joint Applied Research Projects - PCCA 2011- Call Number: PN-II-PT-PCCA-2011-3Research, Romanian Ministry of Research,
- Blanc – Accords bilatéraux 2013 - SIMI 8 2013, National Agency of research, France
- Ressourcement Carnot M.I.N.E.S 2013
- The republican budgetary program 009 in the “Applied scientific researches in area of emergency” Ministry of Emergency Situations of the Republic of Kazakhstan (2013).
- The National Centre of Science and Technology, Republic of Kazakhstan (2014).
- PNCDI III -. Competitiveness by research, development and innovation, Experimental - Demonstration project (PED 2016), Romanian Ministry of scientific Research,
- The National Centre of Science and Technology, Republic of Kazakhstan (2016).

Conference Organization Activities

- Scientific Committee, 8èmes Journées Tunisiennes sur les Ecoulements et les transferts (JTET’ 2013), November 28-30, 2013, Sousse, Tunisia
- Scientific Committee, International Chemical Engineering Congress (INTCEC), December 16-19, 2013, Djerba, Tunisia.
- Scientific Committee, The Fifth International Renewable Energy Congress (IREC), March 25-27, 2014, Hammamet, Tunisia.
- Scientific Committee, The Energy and Materials Research Conference - (EMR2015), 25 - 27 February 2015, Madrid (Spain).

- Scientific Committee, The Sixth International Renewable Energy Congress (IREC), March 25-27, 2015, Sousse, Tunisia.
- Scientific Committee, The Seventh International Renewable Energy Congress (IREC), March 22-24, 2016, Hammamet, Tunisia.
- Scientific Committee, The International Conference on Material, Power and Energy Engineering (MPEE2016) August 19th - 21st, 2016, Shenzhen, China
- Scientific Committee, The eighth International Renewable Energy Congress (IREC), March 21-23, 2017, Dead Sea, Jordan.
- Scientific Committee, The Energy and Materials Research Conference - (EMR2017), 5-7 April 2017, Lisbon (Portugal).
- Scientific Committee, 5th International Conference on Sustainable Solid Waste Management, Athens, 21–24 June 2017 (Greece).
- Scientific Committee, The 2nd International Conference on Environmental Science and Engineering, July 14th-16th, 2017, Xiamen (China).
- Scientific Committee, The ninth International Renewable Energy Congress (IREC), March 19-21, 2018, Hammamet, Tunisia.
- Scientific Committee, 6th International Conference on Sustainable Solid Waste Management, Naxos, 13–16 June 2018 (Greece).

Invited Professor

- Universities :
 - Cyprus Open University, Nicosia, Cyprus, 24-28 April 2018
 - Universidad Politécnica de Cartagena, Cartagena, Spain, 24-27 October 2017
- Research centres
 - Institut für Energie und Umwelttechnik, Duisburg, Germany 27-29 March 2017.
 - Centre de Recherche sur les technologies de l'eau, Tunisia, 15-26 August 2016

THESIS ADVISING ACTIVITIES

Doctor of Philosophy

1. *Ajmia Chouchene*, Experimental and theoretical study of olive mill wastes recovery by thermal and physico-chemical methods, December 2010.
2. *Anne Muller*, Development of a modeling method for evaluating fire safety strategy performance, December 2010
3. *Yassine Elmay*, Experimental and theoretical study of biofuel combustion, December 2012.
4. *Zohra Belala*, Physical and combined activation of date stones. Characterization and application of materials obtained in the treatment of water polluted by heavy metals and organic solvents from industrial discharges, December 2012.
5. *Nesrine Kraiem*, Characterization and study of the drying of wet biomass for energy recovery, March 2015.
6. *Imen Ghouma*, Modeling the kinetics of pyrolysis and carbonization of olive pomace, December 2015.

7. *Jemaa Mabrouki* Study of the process of the energetic recovery of biomass for biofuels production, April 2017.
8. *Khouloud Haddad*, Controlled pyrolysis of lignocellulosic materials modified chemically : Energy recovery and Char use of phosphore retention. October 2018.
9. *Amel Ibn Ferjani*, Recovery of agricultural by-products enriched with nutrients for their use in soil amendment. Expected December 2019.
10. *Tilia Dahou*, Implementation of the gasification of low cost biomass through the understanding of the inorganic elements role. Expected November 2019.

BOOK EDITION

[B1] Char and Carbon from Biomass : Production, Characterization and Applications, Mejdı Jeguirim, Lionel Limousy, Elsevier, 2019.

<https://www.elsevier.com/books/char-and-carbon-materials-derived-from-biomass/jeguirim/978-0-12-814893-8>

SPECIAL VOLUMES EDITION

[SI1] “Modelling and Optimisation in Chemical and Biological Engineering: Application to Wastewater and Gas Treatment” Mejdı Jeguirim, Lionel Limousy, International Journal of Chemical Reactor and Engineering, Volume 12, Issue 2 (December 2014).

[SI2] “International Chemical Engineering Congress 2013 : from fundamentals to applied chemistry and biochemistry”, Lionel Limousy, Mejdı Jeguirim, Comptes Rendus Chimie, Volume 18, Issue 1, Pages 1-120 (January 2015).

[SI3] “Biomass Energy, Environment and Sustainable Development, IREC 2015”, Lionel Limousy, Mejdı Jeguirim, Comptes Rendus Chimie, Volume 19, Issue 4 (April 2016).

[SI4] “Process Engineering for Pollution Control and Waste Minimization”, Mejdı Jeguirim, Lionel Limousy, Environmental Science and Pollution Research, Volume 24, issue 11, 2017.

[SI5] “Biomass Chars: Elaboration, Characterization and Applications”, Mejdı Jeguirim, Lionel Limousy, Energies, 2017

[SI6] “Strategies for Bioenergy Production from Agriculture and Agrifood Processing Residues”, Mejdı Jeguirim, Lionel Limousy, Biofuels, Volume 9 Number 5 October 2018

[SI7] “Biomass Chars: Elaboration, Characterization and Applications”, Second Edition, Mejdı Jeguirim, Lionel Limousy, Energies, 2018.

[SI8] “Clays and Ceramics”, Liva Dzene, Mejdı Jeguirim, Lionel Limousy, Jocelyne Brendlé, Comptes Rendus Chimie, Comptes Rendus Chimie, Volume 22, Issues 2–3, 2019

[SI9] “Biomass Chars: Elaboration, Characterization and Applications”, Third Edition, Mejdı Jeguirim, Lionel Limousy, Energies, Under Progress

[SI10] “Materials for Clean Processes in Energy”, Mejdı Jeguirim, Simona Bennici, Materials, Under Progress.

[SI11] “Wastewater Treatment, Valorization and Reuse”, Mejdı Jeguirim, Salah Jellali, Water, Under Progress.

JOURNAL PUBLICATIONS

- [P1]**M. Jeguirim**, V. Tschamber, J. F. Brilhac and P. Ehrburger, "Interaction mechanism of NO₂ with carbon black: effect of surface oxygen complexes", *Journal of Analytical and Applied Pyrolysis*, 72 (2004) 171-181.
- [P2]**M. Jeguirim**, V. Tschamber, J. F. Brilhac and P. Ehrburger, "Oxidation mechanism of carbon black by NO₂: effect of water vapour", *Fuel*, 84 (2005) 1949-1956.
- [P3]V.Tschamber, **M. Jeguirim**, K. Villani, P. Ehrburger and J. Martens "Comparison of the activity of Ru and Pt catalysts for the oxidation of carbon by NO₂", *Applied Catalysis B: Environmental* 72 (2007) 299–303.
- [P4]**M. Jeguirim**, V. Tschamber and P. Ehrburger "Catalytic effect of platinum on the kinetics of carbon oxidation by NO₂ and O₂", *Applied Catalysis B: Environmental* 76 (2007) 235–240.
- [P5]A Muller, **M. Jeguirim**, F. Demouge, P. Fromy, J.F. Brilhac, "Contribution to the Development of a Systemic Approach for Building Fire Safety Characterization", *Res Systemica, European Systems Science Journal*, Vol 7, December 2008.
- [P6]**M. Jeguirim**, V. Tschamber and J. F. Brilhac "Kinetics and mechanism of the oxidation of carbon by NO₂ in the presence of water vapor", *International Journal of Chemical Kinetics*, 41 (2009) 236-244.
- [P7]**M. Jeguirim**, V. Tschamber and J. F. Brilhac "Kinetics of catalyzed and non-catalyzed soot oxidation with nitrogen dioxide under Regeneration Particle Trap Conditions", *Journal of Chemical Technology & Biotechnology* 84 (2009) 770-776.
- [P8]**M. Jeguirim**, V.Tschamber, K. Villani, J. F. Brilhac and J. Martens "Mechanistic study of Carbon oxidation with NO₂ and O₂ in presence of Ru/Na-Y catalyst", *Chemical Engineering & Technology* 32 (2009) 830-834.
- [P9]**M. Jeguirim**, G. Trouvé "Pyrolysis characteristics and kinetics of Arundo Donax using thermogravimetric analysis", *Bioresource technology* 100 (2009) 4026-4031.
- [P10]**M. Jeguirim**, S. Dorge, G. Trouvé "Thermogravimetric Analysis and Emission Characteristics of two Energy Crops in Air Atmosphere: Arundo Donax and Miscanthus Giganthus", *Bioresource Technology* 101 (2010) 788-793.
- [P11]A. Chouchene, **M. Jeguirim**, B. Khiari, G. Trouvé, F. Zagrouba, Study on the Emission Mechanism during Devolatilization/Char Oxidation and Direct Oxidation of Olive Solid Waste in a fixed bed reactor, *J. of Anal. and App. Pyrolysis* 87 (2010) 168-174.
- [P12]A. Chouchene, **M. Jeguirim**, B. Khiari, G. Trouvé, F. Zagrouba "Thermal degradation behavior of olive solid waste: Influence of the particle size and oxygen atmosphere", *Resources, Conservation & Recycling* 54 (2010) 271-277.
- [P13]**M. Jeguirim**, K. Villani, J. F. Brilhac and J. Martens "Ruthenium and Platinum catalyzed carbon oxidation: a comparative kinetic study", *App Catalysis B: Environmental* 96 (2010) 34-40.
- [P14]**M. Jeguirim**, S. Dorge, A. Loth, G. Trouvé "Devolatilization kinetics of Miscanthus straw from thermogravimetric analysis", *Inter. Journal of Green Energy*, 7: 164–173, 2010.
- [P15]A. Chouchène, **M. Jeguirim**, G. Trouvé, A. Favre-Réguillon, G. Le Buzit, Combined process for the treatment of olive oil mill wastewater: Absorption on sawdust and combustion of the impregnated sawdust, *Bioresource Technology* 101 (2010) 6973.

- [P16]M. Labaki, M. Issa, S. Smeekens, S. Heylen, C.E.A. Kirschhock, K. Villani, **M. Jeguirim**, J.F. Brillhac, J. A. Martens, Modeling of NO_x Adsorption-Desorption-Reduction Cycles on a Ruthenium Loaded Na-Y Zeolite, *Applied Catalysis B: Environmental* 97 (2010) 13–20.
- [P17]N. Zouaoui, J.F. Brillhac, F. Mechat, **M. Jeguirim**, B. Djellouli, P. Gilot “Study of experimental and theoretical procedures when using thermogravimetric analysis to determine kinetic parameters of carbon black oxidation” *Journal of Thermal Analysis and Calorimetry*, 102 (2010) 837-849.
- [P18]**M. Jeguirim**, A. Muller, F. Brenez, Ph. Fromy, F. Demouge, J.F. Brillhac "Reconstruction of an arson fire scene in accommodation unit using Fire Dynamic Simulator", *Journal of Applied Fire Science* 19 (2010) 133-151.
- [P19]Z. Belala, **M. Jeguirim**, M. Belhachemi, F. Addoun, G.Trouvé “Biosorption of copper from aqueous solutions by date stones and palm-trees waste”, *Environmental Chemistry Letters* 9 (2011) 65–69.
- [P20]Z. Belala, **M. Jeguirim**, M. Belhachemi, F. Addoun, G.Trouvé “ Biosorption of basic dye from Aqueous Solutions by Date Stones and Palm-Trees Waste: Kinetic, Equilibrium and Thermodynamic Studies ”, *Desalination* 271 (2011) 80–87.
- [P21]S. Dorge, **M. Jeguirim**, G. Trouvé, Thermal degradation of Miscanthus pellets: kinetics and aerosols characterization, *Waste and Biomass Valorization* 2 (2011)149-155.
- [P22]K. Guedri , M.N. Borjini, **M. Jeguirim**, J.F. Brillhac, R. Saïd, Numerical study of radiative heat transfer effects on a complex configuration of rack storage fire, *Energy* 36 (2011) 2984-2996.
- [P23]A. Chouchène, **M. Jeguirim**, A. Favre-Réguillon, G. Trouvé, G. Le Buzit, B. Khiari, F. Zagrouba “ Energetic Valorisation of Olive Mill WasteWater Impregnated on low cost absorbent: Sawdust versus Olive Solid Waste” *Energy* 39 (2012) 74.
- [P24]**M. Jeguirim**, A. Chouchène, A. Favre-Réguillon, G. Trouvé, G. Le Buzit “A new valorisation strategy of olive mill wastewater : impregnation on sawdust and combustion” *Resources, Conservation & Recycling* 59(2012) 4.
- [P25]N. Zouaoui, M. Issa, D.Kehrli, **M. Jeguirim**, “CeO₂ catalytic activity for soot oxidation under NO/O₂ in loose and tight contact” *Catalysis Today* 189 (2012). 65
- [P26]Y. ElMay, **M. Jeguirim**, S. Dorge, G. Trouvé, R. Saïd "Study on the Thermal behaviour of different date palm residues: Characterization and devolatilization kinetics under inert and oxidative atmospheres" *Energy*. 44 (2012) 702
- [P27]Y. ElMay, S. Dorge, **M. Jeguirim**, G. Trouvé, R. Saïd "Measurement of Gaseous and Particulate Pollutants during Combustion of Date Palm Wastes for Energy Recovery" *Aerosol and Air Quality Research*, 12 (2012) 814
- [P28]Y. ElMay, **M. Jeguirim**, S. Dorge, G. Trouvé, R. Saïd " Experimental Investigation on Gaseous Emissions from the combustion of date palm residues in Laboratory Scale Furnace" *Bioresource Technology* 131 (2013) 94.
- [P29]A. Muller, F. Demouge, **M. Jeguirim**, Ph. Fromy, J.P. Vantelon, The use of Petri nets and a two-zone model for fire scene reconstruction, *Fire Safety Jour.* 55 (2013) 139.
- [P30]A. Muller, F. Demouge, **M. Jeguirim**, Ph. Fromy " SCHEMA-SI : A hybrid fire safety engineering tool. Part I : tool theoretical basis", *Fire Safety Journal*, 58 (2013) 132.

- [P31]A. Muller, F. Demouge, **M. Jeguirim**, Ph. Fromy " SCHEMA-SI : A hybrid fire safety engineering tool. Part II : case study", *Fire Safety Journal*, 58 (2013) 58.
- [P32]L. Limousy, **M. Jeguirim**, P. Dutournié, N. Kraiem, M. Lajili, R. Said "Gaseous products and particulate matter emissions of biomass residential boiler fired with spent coffee grounds pellets" *Fuel* 107 (2013) 323.
- [P33]Y. Elmay, G. Trouvé, **M. Jeguirim**, R. Said "Energy recovery of date palm residues in a domestic pellets boiler" *Fuel Processing Technology* 112 (2013) 12.
- [P34]Y. ElMay, **M. Jeguirim**, S. Dorge, G. Trouvé, R. Said " Evaluation of date palm residues combustion in fixed bed laboratory reactor : A comparison with sawdust behaviour" *Renewable Energy* 62 (2014) 209.
- [P35]Z. Belala, F. Mechati, **M. Jeguirim**, M. Belhachemi, F. Addoun, "Equilibrium modelling of copper ions biosorption by date stones and palm trees waste" *Environmental Engineering and Management Journal*, 13 (2014) 653-662
- [P36]N. Zouaoui, M. Labaki, **M. Jeguirim**, "Diesel soot oxidation by nitrogen dioxide, oxygen and water under engine exhaust conditions : kinetics data related to the reaction mechanism" *Comptes Rendus Chimie* 17 (2014) 672
- [P37]A. Chouchène, **M. Jeguirim**, G. Trouvé, "Biosorption performance, combustion behavior, and leaching characteristics of olive solid waste during the removal of copper and nickel from aqueous solutions" *Clean Techn Environ Policy* 16 (2014) 979-986.
- [P38]**M. Jeguirim**, L. Limousy, P. Dutournie, Pyrolysis kinetics and physicochemical properties of agropellets produced from spent ground coffee blended with conventional biomass, *Chemical Engineering Research and Design* 92 (2014) 1876-1882
- [P39]M. Belhechemi, **M. Jeguirim**, L. Limousy, F. Addoun, Comparison of NO₂ removal using date pits activated carbon and modified commercialized activated carbon via different preparation methods: effect of porosity and surface chemistry, *Chemical Engineering Journal*, 253 (2014) 121-129
- [P40]M. Lajili, L. Limousy, **M. Jeguirim**, Physico-chemical properties and thermal degradation characteristics of agropellets from Olive mills by-product/sawdust blends, *Fuel Processing Technology* 126 C (2014) 215-221
- [P41]**M. Jeguirim**, Y. Elmay, L. Limousy, M. Lajili, R. Said " Devolatilization behavior and pyrolysis kinetics of potential Tunisian biomass fuels " *Environmental Progress and Sustainable Energy*, 33 (2014) 1452–1458.
- [P42]**M. Jeguirim**, J. Bikai, Y. Elmay, L. Limousy, E. Njeugna "Thermal characterization and pyrolysis kinetics of tropical biomass feedstocks for energy recovery" *Energy For Sustainable Development*, 23 (2014) 188-193.
- [P43]N. Kraiem, **M. Jeguirim**, L. Limousy, M. Lajili, S. Dorge, L. Michelin, R. Said, Impregnation of Olive Mill WasteWater on Dry Biomasses: Impact on Chemical Properties and Combustion Performances, *Energy*, 78C (2014) . 506-516
- [P44] Z. Belala, M. Belhachemi, **M. Jeguirim**, Activated carbon prepared from date pits for the retention of NO₂ at low temperature, *International Journal of Chemical Reactor and Engineering*, 12 (2014) 717-726

- [P45] I. Ghouma, **M. Jeguirim**, S. Dorge, L. Limousy, C. Matei Ghimbeu, A. Ouederni, Activated carbon prepared by physical activation of olive stones for the removal of NO₂ at ambient temperature, *C.R. de Chimie*, 18 (2015) 63-74
- [P46] M. Lajili, **M. Jeguirim**, L. Limousy, Performance of a household boiler fed with agropellets blended from olive mill solid waste and pine sawdust, *Fuel* 153 (2015) 431-436
- [P47] J.Mabrouki, M.A. Abbassi, K. Guedri, A. Omri, **M. Jeguirim**, Simulation of biofuel production via fast pyrolysis of palm oil residues, *Fuel* 159(2015) 819-827.
- [P48] L. Limousy, **M. Jeguirim**, S. Labbe, F. Balay, E.Fossard, Performance and emissions characteristics of compressed spent coffee ground/wood chip logs in residential stove, *Energy for Sustainable Development* 28 (2015) 52-59
- [P49] Z. Bouraoui, **M. Jeguirim**, C. Guizani, L. Limousy, C. Dupont, R. Gadiou, Thermogravimetric study on the influence of structural, textural and chemical properties of biomass chars on CO₂ gasification reactivity, *Energy* 88 (2015) 703-710.
- [P50] T. Kraiem, A. Ben Hassen-Trabelsi, S. Naoui, H. Belayouni, **M. Jeguirim**, Characterization of the liquid products obtained from Tunisian waste fish fats using the pyrolysis process, *Fuel Processing Technology*, 138 (2015) 404-412
- [P51] C.Guizani, F.J. Escudero Sanz, **M. Jeguirim**, R. Gadiou, S.Salvador, The effects of textural modifications on beech wood-char gasification rate under alternate atmospheres of CO₂ and H₂O, *Fuel Processing Technology* 138 (2015) 687-694.
- [P52] Z. Bouraoui, C. Dupont, **M. Jeguirim**, L. Limousy, R. Gadiou, CO₂ gasification of woody biomass chars: the influence of K and Si on char reactivity, *Comptes Rendus Chimie*, 19(2016) 457-465
- [P53] J.Mabrouki, K. Guedri, M.A. Abbassi, A. Omri, **M. Jeguirim**, Simulation of the fast pyrolysis of Tunisian biomass feedstocks for biofuels production, *Comptes Rendus Chimie*, 19(2016) 466-474.
- [P54] Y. Elmay, **M. Jeguirim**, G. Trouvé, R. Said " Kinetic analysis of thermal decomposition of date palm residues using Coats-Redfern method " *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 38 (2016) 1117-1124
- [P55] **M. Jeguirim**, L. Limousy, E. Fossard "characterization of coffee residues pellets and their performance in residential combustor", *International Journal of Green Energy* 13 (2016) 608-615.
- [P56] N. Kraiem, M. Lajili, L. Limousy, R. Said, **M. Jeguirim**, Energy Recovery from Tunisian Agri-food wastes: Evaluation of Combustion Performance and Emissions Characteristics of green pellets prepared from Tomato Residues and Grape Marc, *Energy* 107 (2016) 409-418.
- [P57] C. Guizani, K. Haddad, **M. Jeguirim**, B. Colin, L. Limousy, Combustion characteristics and kinetics of torrefied olive pomace, *Energy* 107 (2016) 453-463.
- [P58] C. Guizani, **M. Jeguirim**, J. Escudero Sainz, R. Gadiou, S. Salvador, Biomass char gasification by H₂O, CO₂ and their mixture: Evolution of chemical, textural and structural properties of the chars, *Energy* 112 (2016) 133-145.
- [P59] **M. Jeguirim**, Y. Elmay, L. Limousy, Thermal degradation kinetics and mechanisms of *Posidonia Oceanica* under inert and oxidative atmospheres " *International Journal of Green Energy* 13 (2016) 665-671.

- [P60] L. Limousy, I. Ghouma, A. Ouederni, **M. Jeguirim**, Amoxicillin removal from aqueous solution using activated carbon prepared by chemical activation of olive stone, *Environmental Science and Pollution Research*, 24(2017). 9993-10004.
- [P61] T. Kraiem, A. Ben Hassen-Trabelsi, **M. Jeguirim**, Production and characterization of bio-oil from the pyrolysis of waste frying oil, *Environmental Science and Pollution Research*, 24(2017). 9951-9961.
- [P62] M. Labaki, **M. Jeguirim**, Thermochemical Conversion of Waste Tyres — a review *Environmental Science and Pollution Research*, 24(2017). 9962-9992.
- [P63] B. Wanassi, I. Ben Hariz, C. Matei Ghimbeu, C. Vaultot, M. Ben Hassen, **M. Jeguirim**, Carbonaceous adsorbents derived from textile cotton waste for the removal of Alizarin S dye from aqueous effluent: Kinetic and equilibrium studies. *Environmental Science and Pollution Research*, 24(2017). 10041-10055.
- [P64] A. Tamošiūnas, P. Valatkevičius, D. Gimžauskaitė, **M. Jeguirim**, Vladas Mėčius, M. Aikas, Energy recovery from waste glycerol by utilizing thermal water vapor plasma, *Environmental Science and Pollution Research*, 24(2017). 10030-10040.
- [P65] **M. Jeguirim**, N. Kraiem, M. Lajili, C. Guizani, A. Zorpas, Y. Leva, L. Josien, L. Michelin, L. Limousy, The relationship between mineral contents, particle matter and bottom ash distribution during pellet combustion: molar balance and chemometric analysis, *Environmental Science and Pollution Research*, 24(2017). 9927-9939.
- [P66] H. Moustafa, C. Guizani, C. Dupont, V. Martin, **M. Jeguirim**, A. Dufresne, Utilization of torrefied coffee grounds as reinforcing agent to produce high quality biodegradable PBAT composites for food packaging applications, *ACS sustainable chemistry and engineering*, 5(2017) 1906-1916.
- [P67] C. Guizani, K. Haddad, L. Limousy, **M. Jeguirim**, New insights on the structural evolution of biomass char upon pyrolysis as revealed by the Raman spectroscopy and elemental analysis, *Carbon* 119 (2017) 519-521.
- [P68] A. Tamošiūnas, A. Chouchène, P. Valatkevičius, D. Gimžauskaitė, M. Aikas, R. Uscila, M. Ghorbel, **M. Jeguirim**, The Potential of Thermal Plasma Gasification of Olive Pomace Charcoal. *Energies* 2017, 10(5) 710
- [P69] C. Guizani, **M. Jeguirim**, S. Valin, Limousy, S. Salvador, Biomass chars: the effects of pyrolysis conditions on their morphology, structure, chemical properties and reactivity, *Energies* 2017, 10(6), 796
- [P70] A. Tamošiūnas, P. Valatkevičius, D. Gimžauskaitė, V. Valtinus, **M. Jeguirim**, Glycerol steam reforming for hydrogen and synthesis gas production, *Int. Journal of Hydrogen Energy* (2017) 42, 12896-12904
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- [C64] P. Dutournie, **M. Jeguirim**, L. Limousy, S. Jellali, B. Khiari, Olive mill wastewater controlled drying for material and water recovery, The 10th International Renewable Energy Congress (IREC), March 26-28, 2019, Sousse, Tunisia.
- [C65] B. Khiari, **M. Jeguirim**, Tunisian agro-food wastes recovery by pyrolysis: Thermogravimetric analysis and kinetic study, The 10th International Renewable Energy Congress (IREC), March 26-28, 2019, Sousse, Tunisia.
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[CA2] S. Dorge, D. Kehrlí, **M. Jeguirim**, G. Trouvé "Study of the aerosol formation during the oxidation of wood samples and lignocellulosic polymers by thermogravimetry" 11th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, 24 - 28 August 2008, Prague - Czech Republic.

[CA3] **M. Jeguirim**, V. Tschamber, K. Villani, J.F.Brilhac, J.A. Martens " Kinetics and mechanism of carbon oxidation with NO₂ and O₂ in presence of Ru/Na-Y catalyst" 5th International Conference on Environmental Catalysis, Belfast 31st August to 3rd September 2008

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[CA5] A Muller, **M. Jeguirim**, F Brenez, P Fromy, F Demouge, J.F. Brilhac "The use of fire dynamic simulator for fire scene investigation". Sixth Mediterranean Combustion Symposium, 7-11 June 2009 Porticcio – Ajaccio, Corsica, France.

[CA6] A. Chouchene, **M. Jeguirim**, B. Khiari, F. Zagrouba, G.Trouvé "Pyrolysis and char oxidation of olive solid waste : Analysis and reaction kinetics", 12ème Congrès de la Société Française de Génie des Procédés, 14-16 Octobre 2009, Marseille.

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[CA9] A.Muller, F. Demouge, Ph. Fromy, **M. Jeguirim**, J-F. Brillhac, "Développement d'une méthode de modélisation pour l'évaluation de la performance de stratégies de mise en sécurité incendie dans les bâtiments", WISG 2011, 25-26 Janvier 2011, Université Technologique de Troyes.

[CA10] N. Zouaoui, M. Issa, **M. Jeguirim**, D.Kehrli, J.F. Brillhac, CeO₂ Catalytic activity for soot oxidation under NO/O₂ in loose and tight contact, 6th European Conference Paul Sabatier on Catalysis, 26th/29th September 2011, Strasbourg.

[CA11] M. Lajili, J.E. Sanz, C. Guizani, **M. Jeguirim**, Gasification of Char from Oleic by-products under H₂O-N₂ atmosphere, The Sixth International Renewable Energy Congress (IREC), March 25-27, 2015, Sousse, Tunisia.

[CA12] Z. Bouraoui, C. Dupont, **M. Jeguirim**, C. Guizani, L. Limousy, R. Gadiou CO₂ gasification of various biomass chars: The effect of the textural, structural and chemical properties on reactivity, 23rd European Biomass Conference and Exhibition, 1-4 June 2015, Wien, Austria.

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[CA15] E. Berrich Betouche, R. Balti, S. Jellali, A. Chouchène, B. Ben Thayer, **M. Jeguirim**, Valorisation énergétique et agronomique de coques d'amande brutes et imprégnées par des margines, Colloque combustion des biocarburants, de la biomasse et de ses dérivés, 8 novembre 2017, Lille, France.

[CA16] U. Sager, M. Jeguirim, E. Däuber, L. Limousy, S. Bennici, C. Matei Ghimbeu, R. Ligotski, F. Schmidt, NO_x adsorption performance of different charcoals physically activated with water vapour, July 1st-6th , 2018, Madrid Spain

COURSES TAUGHT

Undergraduate Courses

General Chemistry (Fall 2005)

Heat Transfer (Spring 2007, 2008, 2009)

Graduate Courses

Heat Transfer (Fall 2007-2017)

Fluid Dynamics (Fall 2007-2017)

Convection Heat Transfer (Spring 2006-2008)

Radiation Heat Transfer (Spring 2006-2008)

Fire Simulation (Spring 2006)

Combustion (Fall 2007-2017)

Process Engineering (Fall 2005-2008, Fall 2019)

Solar Energy (Fall 2011)
Biomass Energy (Fall 2011-2017)
Heating pump (Fall 2014-2017)
Tools and Methods for Renewable Energy (Fall 2007-2017)
Thermochemistry (Fall 2019)
Analytical Chemistry (Fall 2019)

UNIVERSITY ACTIVITIES

Head of Energy and HVAC Professional Degree, Specialty: Renewable Energy and Sustainable Development (EN2D) at the Faculty of Science and Technology of Mulhouse from September 2007 to October 2017.

- Animation of the teaching staff and organizing schedules.
- Supervision tutored projects.
- Follow-up practical trainee placements.

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