
CURRICULUM VITAE

ELENI HERACLEOUS

May 2012

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1. PERSONAL DATA

NAME: Eleni Heracleous

DATE / PLACE OF BIRTH: 20 September 1977 / Cyprus

OCCUPATION: Ph.D. Dipl.-Ing. Chemical Engineer - Associate Research Scientist at the Centre for Research and Technology Hellas (CERTH)

WORK ADDRESS: Chemical Process Engineering Research Institute (CPERI)
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2. EDUCATION

2.1. University studies

- 2000 – 2005 **Ph.D. in Chemical Engineering** (Excellent)
Aristotle University of Thessaloniki, Department of Chemical Engineering
Thesis title: “Novel selective catalytic process for the production of ethylene”
Supervisor: Associate Professor Angeliki A. Lemonidou
- 1995 – 2000 **Dipl.-Ing. in Chemical Engineering** (Graduation grade: 8.2/10)
Aristotle University of Thessaloniki, Department of Chemical Engineering
Diploma Thesis title: “Non-conventional methods for ammonia synthesis”
Technical&Economic Plant Design Project: “Design of a citric acid production plant”
- 1992 – 1995 **Lyceum certificate** (Graduation grade: 19.9/20)
Pallouriotissa Lyceum, Nicosia, Cyprus

2.2. Post-graduate education & training

- 11/2006 Training seminar series entitled: “Fuel Product and Product Quality Management”, organized by Shell Global Solutions

- 9-13/10/2006 Training seminar series entitled: “Fuels Technical Training Course”, organized by Shell Global Solutions, Shell Technology Centre Thornton, Chester, UK
- 5/2005 Seminar series organized by the Research Committee of the Aristotle University of Thessaloniki (AUTH), Greece
Main topics covered in the frame of the seminar series: Composing & Submitting Research Proposals, Research Methodology, Research Management, Quality Management, Benchmarking, Innovation & New Product Development, Intellectual Property Rights
- 19/4-7/5/2004 Department of Chemistry, University of York, Great Britain
3-week visit in the frame of collaboration between the University of York and the Aristotle University of Thessaloniki
Performed characterization of metal oxide catalysts with X-ray Photoelectron Spectroscopy (XPS) and UV-vis Diffuse Reflectance Spectroscopy (DRUVS)
- 8-16/12/2003 Seminar entitled: “Exploitation of natural gas resources”, organized by the Aristotle University of Thessaloniki (AUTH) and the Centre of Research and Technology Hellas (CERTH), Thessaloniki, Greece
- 12/2002 Department of Technical Chemistry, Technical University of Munich, Germany
1-month visit in the frame of a Greek-German bilateral research project between the Technical University of Munich and the Aristotle University of Thessaloniki
Performed in situ Infrared Spectroscopy (IR) studies for elucidating the reaction mechanism of ethane oxidative dehydrogenation over metal oxide catalysts
- 13-15/6/2001 Seminar on Gas Chromatography, organized by the Chemical Process Engineering Research Institute (CERTH/CPERI), Thessaloniki, Greece
- 28/3-1/4/2001 1st EFCATS School on Catalysis, “New trends in Catalysis and Application”, organized by the European Federation of Catalysis Societies (EFCATS), Prague, Czech Republic

2.3. Language skills

| | |
|--------------------|--|
| English (fluently) | IELTS (International English Language Testing System), Band score: 8/9, Proficiency General Certificate of Education ‘O-level’ in English Cambridge First Certificate in English |
| French (good) | General Certificate of Education ‘O-level’ in French |
| German (basic) | Berlitz Level 3 |

2.4. Computer skills

Competent with most Microsoft computer programs

Microsoft Office (Word, Excel, PowerPoint, Access)

Visio, MatLab, Aspen, Spectra Processing Software (Grams, Jascow, PowderCell, CasaXPS, Universal Analysis etc)

3. PROFESSIONAL & RESEARCH ACTIVITIES

- 2009 - today Laboratory of Reformulated Fuels and Hydrocarbons, Chemical Process Engineering Research Institute (CPERI/CERTH), Thessaloniki – **Associate Researcher**
Development/testing/physicochemical characterization of catalysts for the production of ethylene via ethane oxidative dehydrogenation and higher alcohols production from biomass. Environmental assessment of various biofuel production processes via LCA.
- 2008 Laboratory of Reformulated Fuels and Hydrocarbons, Chemical Process Engineering Research Institute (CPERI/CERTH), Thessaloniki – **Marie-Curie Fellowship**
Development and assessment of alternative heating fuels via life cycle analysis (LCA); determination of the properties of the biofuels under study and testing in domestic/industrial/marine applications. Continuation of the Marie-Curie research project in collaboration with Shell Global Solutions
- 2006 – 2007 PAE-Labor, Shell Global Solutions (Deutschland) GmbH, Hamburg, Germany – **Marie-Curie Host Fellowship**
Development and assessment of alternative heating fuels via life cycle analysis (LCA); environmental impact of biofuels (biodiesel, vegetable oil, pyrolysis oil etc) and synthetic fuels (GTL – gas to liquids, BTL etc); suitability of alternative fuels for use as heating fuels and upgrading methods
- 2003 – 2005 Laboratory of Petrochemical Technology, Department of Chemical Engineering, Aristotle University of Thessaloniki
Development of metal oxide catalysts (supported early transition metal oxides, multicomponent supported and bulk Ni-based oxides) for the production of ethylene via ethane oxidative dehydrogenation; preparation, physicochemical characterization and testing of the catalysts; study of reaction mechanism with various in situ, isotopic and transient techniques; development of kinetic model describing the catalytic performance in the ethane oxidative dehydrogenation reaction
- 2000 – 2002 Laboratory of Reformulated Fuels and Hydrocarbons, Chemical Process Engineering Research Institute (CPERI/CERTH), Thessaloniki

Preparation and characterization of transition metal oxides with various physicochemical techniques

- 7-9/1999 Oceanographic Company of Norway ASA (Oceanor), Trondheim, Norway
Participation in R&D project supported by The Norwegian Research Council and Oslo Airport AS for the development of an online voltametric analyzer for the detection of heavy metals in the soil
Testing of glassy carbon electrodes, performed both experimental and statistical work

PARTICIPATION IN RESEARCH PROJECTS

1. “EuroBioRef - EUROpean multilevel integrated BIOREFinery design for sustainable biomass processing”, EU Collaborative Project FP7-2009-BIOREFINERY_CP, Project Duration: 48 months, project approved and expected to start 03/2010
2. “Optimized Fuels for Sustainable Transport in Europe”, EU Collaborative Project ENERGY.2007.3.2.5: Synthetic biofuels via gasification, 2008-2012
3. “Alkanes to light olefins via novel catalysts and process schemes: AL2OL”, Εγκεκριμένο Έργο της 1^{ης} Κοινής Ευρωπαϊκής Προκήρυξης του ACENET-ERANET, Κωδικός έργου: ACE.07.003, Γενική Γραμματεία Έρευνας και Τεχνολογίας, 2009-2012
4. “Novel efficient catalysts for bio-syngas conversion to C₂-C₄ alcohols: GAS2ALCO”, Marie-Curie European Reintegration Grant (ERG), Contract No: PERG04-GA-2008-235058, 2009-2012
5. “CO₂ reduction through automotive bio-component & sustainable step changes in fuels and lubricants performance: SUSTAINABLE FUELUBE”, Marie-Curie Host Fellowship for the Transfer of Knowledge (ToK), Industry-Academia Partnership Scheme, Contract No: MTKI-CT-2004-509777, 2006-2008
6. “CO-ordination of Nanostructured Catalytic Oxides Research and Development in Europe: CONCORDE”, European Union Coordination Action, FP6 Contract No: NMP2-CT-2004-505834, 2004-2006
7. “Novel selective catalytic processes for the production of ethylene and propylene”, National Research Programme supported by the General Secretariat for Research and Technology (GSRT) Hellas, 2003-2006
8. “Novel nanoscopically tailored cracking catalysts for the efficient production of ethene and propene”, Greek-German Joint Research and Technology Programme supported by the General Secretariat for Research and Technology (GSRT) Hellas, 2002-2004

4. TEACHING EXPERIENCE

- April 2010 Invited instructor at the educational seminar series
“Introduction to Instrumental Analysis Techniques”, organized by the Dept of Chemical Engineering, AUTH, in the

frame of postgraduate and Ph.D. students training seminars.
Covered topic: **“Characterization of solid catalysts via temperature-programmed methods”** (1 hour)

Summer semester 2007/08 Temporary lecturer at the Department of Chemical Engineering of the Aristotle University of Thessaloniki. Teaching of 4th year elective course “Liquid Fuel Processes”. Course description: Physical and Chemical Refinery Processes for the Production of Liquid Fuels, Processes for the Production of Biofuels, LCA for the Environmental Assessment of Biofuels

February 2008 Invited instructor at the educational seminar series **“Bioenergy and Biofuels”** (80 hours), organized by the Centre of Research and Technology Hellas (CERTH) in the frame of the project Networks for Research and Technology Training. Covered topic: **“Biofuels and Environment”** (6 hours)

December 2007 Invited instructor at the educational seminar series **“Utilization of biomass for the production of alternatives fuels and high-added value chemicals”**, co-organized by the Aristotle University of Thessaloniki (AUTH) and the Centre of Research and Technology Hellas (CERTH) in the frame of the project Networks for Research and Technological Training. Covered topics: **“Evaluation of the environmental impacts of biofuels via Life Cycle Analysis”** (5 hours).

Winter semester 2005/06 Teaching assistant in the laboratory course **“Selective Catalytic Reduction of NO_x emissions with hydrocarbons in refinery units”**, in the frame of the elective course Environment Laboratory I of the Department of Chemical Engineering, AUTH

Summer semesters 02/03, 03/04 Teaching assistant in the laboratory course **“Determination of diesel fuel properties – Diesel Fuel Specifications”**, in the frame of the obligatory 4th year course Chemical Engineering Laboratory II of the Department of Chemical Engineering, AUTH

CO-SUPERVISION OF Ph.D THESIS

1. Z. Skoufa, **“Production of ethylene via ethane oxidative dehydrogenation over Ni-based catalysts”**, Department of Chemical Engineering, AUTH, on-going
2. E. Liakakou, **“Thermochemical conversion of biosyngas to higher alcohols”**, Department of Chemical Engineering, AUTH, on-going

CO-SUPERVISION OF UNDERGRADUATE DIPLOMA THESIS

1. L. Theodorou, “**Life Cycle Analysis of propylene glycol production from renewable and fossil glycerine**”, Department of Chemical Engineering, AUTH, on-going
2. N. Pegios, “**Evaluation of a field trial to demonstrate fitness-for-purpose of tailored bioheating oil in home heating application**”, Department of Chemical Engineering, AUTH, March 2011 - *The diploma thesis was conducted in collaboration with Shell Global Solutions (Deutschland) GmbH at their site in Hamburg, Germany*
3. A. Gemenentzi, “**Assessment of alternative solid biofuels for use as domestic heating fuels**”, Department of Chemical Engineering, AUTH, July 2010 - *The diploma thesis was conducted in collaboration with Shell Global Solutions (Deutschland) GmbH at their site in Hamburg, Germany*
4. M. Kalaitzidou, “**Life Cycle Analysis for the evaluation of the environmental impacts of hydrogen production form bio-oil**”, Department of Chemical Engineering, AUTH, July 2010
5. M. Kalaitzis, “**Comparison of the environmental impacts of 2nd generation bioethanol production via thermochemical and bioenzymatic processes using the Life Cycle Analysis method**”, Department of Chemical Engineering, AUTH, July 2010
6. Z. Skoufa, “**Mixed nickel-based oxides for the oxidative dehydrogenation of ethane to ethylene: Study of the oxygen activation mechanism with isotopic oxygen ¹⁸O₂**”, Department of Chemical Engineering, AUTH, July 2009
7. Ch. Doulgeridis, “**Oxidative dehydrogenation of ethane to ethylene over mixed nickel-based oxides: Effect of the preparation method**”, Department of Chemical Engineering, AUTH, July 2009
8. D. Sfakianakis, “**Investigation of active and selective nickel-based mixed oxides for the oxidative dehydrogenation of ethane to ethylene**”, Department of Chemical Engineering, AUTH, March 2009
9. K. Goulas, “**Assessment of alternative pellets in a domestic heating wood pellet burner**”, Department of Chemical Engineering, AUTH, January 2009 - *The diploma thesis was conducted in collaboration with Shell Global Solutions (Deutschland) GmbH at their site in Hamburg, Germany*
10. K. Panou, Ch. Panou, “**Kinetic analysis and mathematical modeling of the temperature-programmed reduction (TPR-H₂) of Ni-Cu/Al₂O₃ catalysts**”, Department of Chemical Engineering, AUTH, July 2004

5. SCIENTIFIC RECOGNITION/ACHIEVEMENTS

5.1. Scholarships

Marie Curie Grant Reintegration grant in the frame of the European Scheme “Marie-Curie European Reintegration Grants, Support for training and career development of researchers” **2009-2012**

Marie Curie Fellowship *Post-doctoral scholarship in the frame of the European Scheme “Marie-Curie Host Fellowships for the Transfer of Knowledge (ToK), Industry-Academia Partnership Scheme” 2006-2008*

State Scholarships Foundation (IKY) *Scholarship for excellent academic performance*
1995

5.2. Memberships in scientific/professional organizations

Member, Technical Chamber of Greece (TEE-TCG)
Member, Panhellenic Society of Chemical Engineers
Member, Hellenic Catalysis Network
Licensed Chemical Engineer

5.3. Organization of scientific conferences

- Member of the organizing committee for the 15th International Congress on Catalysis 2012 post-satellite conference “CAT4BIO - Advances in Catalysis for Biomass Valorization”, 8-11 July 2012, Thessaloniki, Greece.
Organizers: Greek Catalysis Society under the auspices of CERTH and AUTH
- Member of the organizing committee for the summer school «Utilization of Biomass for the Production of Chemicals or Fuels: The concept of Biorefinery comes into operation» organized in the frame of training activities of the European project EuroBioRef, 18-24 September 2011, Castro Marina (Italy). Organizer: EuroBioRef.
- Member of the organizing committee for the summer school “Catalysis Lectures for Environmental Applications and Renewable – CLEAR”, 24-29 May 2009, Chalkidiki.
Organizers: ACENET & EFCATS under the auspices of CERTH, IDECAT and ERIC

5.4. Refereeing in international scientific journals

- Applied Catalysis A: General
- Applied Catalysis B: Environmental
- Catalysis Communications
- Catalysis Today
- Chemical Engineering Communications
- Chemical Engineering Journal
- Fuel
- Fuel Processing Technology
- Journal of Catalysis
- Journal of Molecular Catalysis A: Chemical
- Journal of Natural Gas Chemistry
- Thermochemica Acta

5.5. International acclaim of research activities

| A/A | Journal | No. of papers | Impact Factor 2010 |
|-----|--|---------------|--------------------|
| 1 | Journal of Catalysis | 5 | 5,415 |
| 2 | Applied Catalysis A: General | 4 | 3,383 |
| 3 | Catalysis Today | 4 | 2,993 |
| 4 | Journal of Molecular Catalysis A: Chemical | 1 | 2,872 |
| 5 | Catalysis Letters | 1 | 1,907 |
| 6 | Ind. & Eng. Chemistry Research | 1 | 2,072 |
| 7 | Chemical Engineering Journal | 1 | 3,074 |
| 8 | Applied Catalysis B: Environmental | 1 | 4,749 |
| 9 | International J of Hydrogen Energy | 1 | 4,053 |
| | SUM | 19 | |
| | <i>NUMBER OF CITATIONS (excl self-citations)</i> | 247 | |
| | <i>h index</i> | 10 | |

6. PUBLICATIONS

Summary of published work

| | |
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| <i>Publications in peer-reviewed journals</i> | 19 |
| <i>Publications in peer-reviewed books</i> | 3 |
| <i>Publications in peer-reviewed conference proceedings</i> | 2 |
| <i>Conference presentations/publications in conference proceedings</i> | 44 |
| <i>Workshop presentations</i> | 6 |
| <i>Teaching notes</i> | 1 |

6.1. Publications in peer-reviewed journals

- A1. Z. Skoufa, **E. Heracleous**, A.A. Lemonidou, “Unraveling the contribution of structural phases in Ni-Nb-O mixed oxides in ethane oxidative dehydrogenation”, *Catalysis Today* (2012), doi:10.1016/j.cattod.2011.12.022
- A2. **E. Heracleous**, “Well-To-Wheels Analysis Of Hydrogen Production From Bio-Oil Reforming For Use In Internal Combustion Engines”, *International Journal of Hydrogen Energy* 36 (2011) 11501
- A3. **E. Heracleous**, A.A. Lemonidou, “Ni-Me-O mixed metal oxides for the effective oxidative dehydrogenation of ethane to ethylene - Effect of promoting metal Me”, *Journal of Catalysis* 270 (2010) 67 (hetero-citations: 3)

- A4. M.L. Rodriguez, D.E. Ardisson, **E. Heracleous**, A.A. Lemonidou, E. Lopez, M.N. Pedernera, D.O. Borio, "Oxidative dehydrogenation of ethane to ethylene in a membrane reactor: a theoretical study", *Catalysis Today* 157 (2010) 303
- A5. E.S. Vasiliadou, **E. Heracleous**, I.A. Vasalos, A.A. Lemonidou, "Ru-based catalysts for glycerol hydrogenolysis", *Applied Catalysis B: Environmental* 92 (2009) 90 (hetero-citations: 10)
- A6. M.L. Rodriguez, D.E. Ardisson, **E. Heracleous**, A.A. Lemonidou, E. López, M.N. Pedernera, D.O. Borio, "Simulation of a membrane reactor for the catalytic oxydehydrogenation of ethane", *Industrial & Engineering Chemistry Research* 48 (2009) 1090 (hetero-citations: 1)
- A7. E. Lopez, **E. Heracleous**, A.A. Lemonidou, D.O. Borio, "Study of a multitubular fixed-bed reactor for ethylene production via ethane oxidative dehydrogenation", *Chemical Engineering Journal* 145 (2008) 308 (hetero-citations: 1)
- A8. **E. Heracleous**, A. Delimitis, L. Nalbandian, A.A. Lemonidou, "HRTEM characterization of the nanostructural features formed in highly active Ni-Nb-O catalysts for ethane ODH", *Applied Catalysis A: General* 325 (2007) 220 (hetero-citations: 6)
- A9. A. Christodoulakis, **E. Heracleous**, A.A. Lemonidou, S. Boghosian, "An operando Raman study of structure and reactivity of alumina-supported molybdenum oxide catalysts for the oxidative dehydrogenation of ethane", *Journal of Catalysis* 242 (2006) 16 (hetero-citations: 18)
- A10. **E. Heracleous**, A.A. Lemonidou, "Reaction pathways of ethane oxidative and non-oxidative dehydrogenation on γ -Al₂O₃ studied by temperature-programmed reaction (TP-reaction)", *Catalysis Today* 112 (2006) 23 (hetero-citations: 5)
- A11. **E. Heracleous**, A.A. Lemonidou, "Ni-Nb-O mixed oxides as highly active and selective catalysts for ethene production via ethane oxidative dehydrogenation. I. Characterization and catalytic performance", *Journal of Catalysis* 237 (2006) 162 (hetero-citations: 31)
- A12. **E. Heracleous**, A.A. Lemonidou, "Ni-Nb-O mixed oxides as highly active and selective catalysts for ethene production via ethane oxidative dehydrogenation. II. Mechanistic aspects and kinetic modelling", *Journal of Catalysis* 237 (2006) 175 (hetero-citations: 22)
- A13. **E. Heracleous**, A.F. Lee, K. Wilson, A.A. Lemonidou, "Investigation of Ni-based alumina supported catalysts for the oxidative dehydrogenation of ethane to ethylene: Structural characterization and reactivity studies", *Journal of Catalysis* 231 (2005) 159 (hetero-citations: 44)
- A14. **E. Heracleous**, M. Machli, A.A. Lemonidou, I.A. Vasalos, "Oxidative dehydrogenation of ethane and propane over vanadia and molybdena supported catalysts", *Journal of Molecular Catalysis A: Chemical* 232 (2005) 29 (hetero-citations: 45)

- A15. **E. Heracleous**, A.A. Lemonidou, “Homogeneous and heterogeneous pathways of ethane oxidative and non-oxidative dehydrogenation studied by Temperature-Programmed Reaction”, *Applied Catalysis A: General* 269 (2004) 123 (hetero-citations: 10)
- A16. **E. Heracleous**, J. Vakros, A.A. Lemonidou, Ch. Kordulis, “Role of preparation parameters on the structure-selectivity properties of MoO₃/Al₂O₃ catalysts for the oxidative dehydrogenation of ethane”, *Catalysis Today* 91-92 (2004) 289 (hetero-citations: 6)
- A17. **E. Heracleous**, A.A. Lemonidou, J.A. Lercher, “Mechanistic features of the ethane oxidative dehydrogenation by in situ FTIR spectroscopy over a MoO₃/Al₂O₃ catalyst”, *Applied Catalysis A: General* 264 (2004) 73 (hetero-citations: 16)
- A18. **E. Heracleous**, A.F. Lee, I.A. Vasalos, A.A. Lemonidou, “Surface properties and reactivity of Al₂O₃-supported MoO₃ catalysts in ethane oxidative dehydrogenation”, *Catalysis Letters* 88 (2003) 47 (hetero-citations: 11)
- A19. M. Machli, **E. Heracleous**, A.A. Lemonidou, “Effect of Mg addition on the catalytic performance of V-based catalysts in oxidative dehydrogenation of propane”, *Applied Catalysis A: General* 236 (2002) 23 (hetero-citations: 18)

6.2. Publications in peer-reviewed books

- B1. **Eleni Heracleous**, “Assessment of the environmental impacts of biofuels via Life Cycle Analysis (LCA)”, in ‘Biofuels’, to be published by the Panhellenic Association of Chemical Engineers
- B2. **Eleni Heracleous**, Aggelos Lappas, “Production of synthetic liquid biofuels via Fischer-Tropsch», in ‘Biofuels’, to be published by the Panhellenic Association of Chemical Engineers
- B3. **E. Heracleous**, A. Lappas, “Production of biofuels via Fischer-Tropsch (FT) Synthesis”, In R. Luque, J. Campelo, J.H. Clark (Eds), ‘*Handbook of biofuels production - Processes and Technologies*’, Woodhead Publishing, Cambridge, UK, 2010 *forthcoming*

6.3. Publications in peer-reviewed conference proceedings

- C1. **E. Heracleous**, A.A. Lemonidou, “Selective oxidation of C₂-C₃ alkanes to alkenes - Use of nanostructured oxidic catalysts”, *La Chimica e L'Industria* 10 (2007) 120
- C2. E. López, **E. Heracleous**, A.A. Lemonidou, D.O. Borio, “Study of a wall-cooled multitubular fixed-bed reactor for ethylene production via ethane oxidative dehydrogenation”, *Proceedings of the XV Congreso Argentino de Catalisis*, La Plata (Αργεντινή), Νοέμβριος 12-16, 2007

6.4. Conference presentations/publications in conference proceedings

- D1. E. Liakakou, **E. Heracleous**, A.A. Lemonidou, "Investigation of Cu/X/Al and Cu/Zn/X (X=Cr, Mn) mixed oxide catalysts for the synthesis of higher alcohols from biosyngas", 21st Panhellenic Chemistry Conference 2011, Thessaloniki, December 9-12, 2011
- D2. L. Lagkaditi, Z. Skoufa, **E. Heracleous**, A.A. Lemonidou, "Supported Nb/NiO catalysts for the oxidative dehydrogenation of ethane to ethylene", 21st Panhellenic Chemistry Conference 2011, Thessaloniki, December 9-12, 2011
- D3. E. Liakakou, **E. Heracleous**, A.A. Lemonidou, "Thermochemical conversion of syngas to higher alcohols over CuZnAl catalysts", EuroBioRef School on 'Utilization of Biomass for the Production of Chemicals or Fuels: The concept of Biorefinery comes into operation', Castro Marina (Italy), September 18-24, 2011
- D4. E. Liakakou, **E. Heracleous**, "Synthesis of higher alcohols from syngas over K-promoted CuZnAl catalysts", 10th European Congress in Catalysis, Glasgow (Scotland), August 28-September 2, 2011
- D5. Z. Skoufa, **E. Heracleous**, A.A. Lemonidou, "Isotopic studies of ethane ODH on Ni-based selective catalysts", 10th European Congress in Catalysis, Glasgow (Scotland), August 28-September 2, 2011
- D6. **E. Heracleous**, E.F. Iliopoulou, A.A. Lappas, I.A. Vasalos, "Isomerization of surrogate BtL-Naphtha for the production of high quality HCCI biofuel", 10th European Congress in Catalysis, Glasgow (Scotland), August 28-September 2, 2011
- D7. E.Th. Liakakou, **E. Heracleous**, "Experimental and thermodynamic study of the effect of operating variables on the catalytic production of alcohols from bio-synthesis gas", 8th Panhellenic Chemical Engineering Conference, Thessaloniki (Greece), May 26-28, 2011
- D8. M. Kalaitzidou, **E. Heracleous**, A.A. Lemonidou, "Evaluation of the environmental impact of hydrogen production from biomass via bio-oil steam reforming with Life Cycle Analysis", 8th Panhellenic Chemical Engineering Conference, Thessaloniki (Greece), May 26-28, 2011
- D9. Z. Skoufa, **E. Heracleous**, A.A. Lemonidou, "Unraveling the contribution of structural phases in Ni-Nb-O mixed oxides for ethane oxidative dehydrogenation", 8th Panhellenic Chemical Engineering Conference, Thessaloniki (Greece), May 26-28, 2011
- D10. Z. Skoufa, **E. Heracleous**, A.A. Lemonidou, "Unraveling the contribution of structural phases in Ni-Nb-O mixed oxides for ethane oxidative dehydrogenation", VII International Symposium on Group Five Elements, Riccione (Italy), May 8-11, 2011
- D11. **E. Heracleous**, E.F. Iliopoulou, A.A. Lappas, "Upgrading of BTL-naphtha via isomerization", 11th Panhellenic Catalysis Symposium, Athens (Greece), October 22 - 23, 2010
- D12. Z. Skoufa, **E. Heracleous**, A.A. Lemonidou, "Elucidation of the role of the doping metal in mixed nickel oxides via advanced mechanistic and kinetic studies", 11th Panhellenic Catalysis Symposium, Athens (Greece), October 22 - 23, 2010

- D13. Z. Skoufa, **E. Heracleous**, A.A. Lemonidou, “Comparative kinetic study of Ethane Oxidative Dehydrogenation over NiO and Nb-doped NiO”, 4th IDECAT Conference on Catalysis ‘Emerging Challenges in Catalysis’, Porquerolles (France), May 12-19, 2010
- D14. E.S. Vasiliadou, **E. Heracleous**, A.A. Lemonidou, “Valorization of biodiesel by-products: catalytic hydrogenolysis of glycerol to high added value chemicals”, 3^o Conference in Green Chemistry & Sustainable Development, Thessaloniki (Greece), September 25-27, 2009
- D15. E.S. Vasiliadou, **E. Heracleous**, A.A. Lemonidou, “Effect of support and metal precursor on the hydrogenolysis of glycerol over Ru catalysts”, 9th European Congress in Catalysis, Salamanca (Spain), August 30 - September 4, 2009
- D16. **E. Heracleous**, D. Sfiakianakis, A.A. Lemonidou, “Ni-based mixed metal oxides for the effective oxidative dehydrogenation of ethane to ethylene”, 6th World Congress on Oxidation Catalysis, Lille (France), July 5-10, 2009
- D17. M.L. Rodriguez, D.E. Ardisson, **E. Heracleous**, A.A. Lemonidou, E. Lopez, M.N. Pedernera, D.O. Borio, “Analysis of a multitubular membrane reactor for the oxidative dehydrogenation of ethane to ethylene”, 6th World Congress on Oxidation Catalysis, Lille (France), July 5-10, 2009
- D18. **E. Heracleous**, Ch. Doulgeridis, A.A. Lemonidou, “Oxidative dehydrogenation of ethane to ethylene over nickel-based mixed oxides: Effect of preparation method”, 7th Panhellenic Chemical Engineering Conference, Patras (Greece), June 3-5, 2009
- D19. E.S. Vasiliadou, **E. Heracleous**, A.A. Lemonidou, “Glycerol upgrading to high added value chemicals: Hydrogenolysis to 1,2-propanediol”, 7th Panhellenic Chemical Engineering Conference, Patras (Greece), June 3-5, 2009
- D20. E.S. Vasiliadou, **E. Heracleous**, I.A. Vasalos, A.A. Lemonidou, “Hydrogenolysis of glycerol over ruthenium catalysts”, 10th Panhellenic Catalysis Symposium, Metsovo (Greece), October 3 - 4, 2008
- D21. M.L. Rodriguez, D.E. Ardisson, **E. Heracleous**, A.A. Lemonidou, E. López, M.N. Pedernera, D.O. Borio, “Simulation of a membrane reactor for the catalytic oxydehydrogenation of ethane”, Mexican Congress on Chemical Reaction Engineering (MCCRE 2008), Ixtapa-Zihuatanejo, Guerrero (Mexico), June 15-19, 2008
- D22. **E. Heracleous**, F. Haase, I.A. Vasalos, “Not all biofuels are equal: Using Life Cycle Analysis to assess environmental impacts of different biofuels”, 3rd Environmental Conference of Macedonia, Thessaloniki (Greece), March 14-17, 2008
- D23. E. López, **E. Heracleous**, A.A. Lemonidou, D.O. Borio, “Study of a wall-cooled multitubular fixed-bed reactor for ethylene production via ethane oxidative dehydrogenation”, XV Congreso Argentino de Catalisis, La Plata (Argentina), November 12-16, 2007

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- D25. **E. Heracleous**, A.A. Lemonidou, “Transient isotopic measurements and kinetic studies of ethane oxidative dehydrogenation over Ni-Nb-O mixed oxide catalysts”, 19th International Symposium on Chemical Reaction Engineering, Potsdam/Berlin (Germany), September 3-6, 2006
- D26. **E. Heracleous**, S. Bezergianni, F. Haase, I.A. Vasalos, “Biofuels and their environmental impact”, 46th Congress of the European Regional Science Association, Volos (Greece), August 30 – September 3, 2006
- D27. **E. Heracleous**, “SUSTAINABLE FUELUBE: Development of alternative heating fuels”, 17th Sustainable Energy Marie Curie Research Fellowships Conference, Athens (Greece), May 20-24, 2006
- D28. **E. Heracleous**, A.A. Lemonidou, I.A. Vasalos, “Kinetic modelling of ethane oxidative dehydrogenation over Ni-Nb-O mixed oxide catalysts”, XVII International Conference on Chemical Reactors, Athens (Greece), May 15-17, 2006
- D29. **E. Heracleous**, A. Delimitis, L. Nalbandian, A.A. Lemonidou, “HRTEM characterization of the nanostructural features formed in highly active Ni-Nb-O catalysts for ethane ODH”, 2nd Conference of the European Union Coordination Action “CO-ordination of Nanostructured Catalytic Oxides Research and Development in Europe”: CONCORDE, Thessaloniki (Greece), January 26-28, 2006
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- D32. **E. Heracleous**, J. Kopečný, A.A. Lemonidou, “Novel Ni-Nb-O catalysts for ethylene production”, 5th Panhellenic Chemical Engineering Conference, Thessaloniki (Greece), May 26-28, 2005
- D33. **E. Heracleous**, A.F. Lee, K. Wilson, A.A. Lemonidou. “Ethylene production via oxidative dehydrogenation in the presence of highly active nickel-based catalysts”, 19th North American Catalysis Society Meeting, Philadelphia, Pennsylvania (USA), May 22-27, 2005
- D34. **E. Heracleous**, A.A. Lemonidou, “Reaction pathways of ethane oxidative and non-oxidative dehydrogenation over γ -Al₂O₃ studied by Temperature-Programmed Reaction (TP-reaction)”, 1st Conference of the European Union Coordination Action “CO-

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- D36. M. Machli, **E. Heracleous**, A.A. Lemonidou, "Oxidative dehydrogenation of ethane and propane over vanadia and molybdena catalysts", 8th Panhellenic Catalysis Symposium, Ayia Napa (Cyprus), October 30- November 1, 2004
- D37. **E. Heracleous**, C. Panou, X. Panou, A.A. Lemonidou, "Kinetic analysis and mathematical modeling of the Temperature-Programmed Reduction (TPR-H₂) of Ni-Cu/Al₂O₃ catalysts", 8th Panhellenic Catalysis Symposium, Ayia Napa (Cyprus), October 30- November 1, 2004
- D38. **E. Heracleous**, A.A. Lemonidou, J.A. Lercher, "Ethane oxidative dehydrogenation by in situ IR spectroscopy over a MoO₃/Al₂O₃ catalyst", 13th International Congress on Catalysis, Paris (France), July 11-16, 2004
- D39. **E. Heracleous**, J. Vakros, A.A. Lemonidou, Ch. Kordulis, "Role of preparation parameters on the structure-selectivity properties of MoO₃/Al₂O₃ catalysts for the oxidative dehydrogenation of ethane", 6th European Congress in Catalysis, Innsbruck (Austria), August 31-September 4, 2003
- D40. **E. Heracleous**, A.A. Lemonidou, "Study of the performance of a 20 wt.% MoO₃/Al₂O₃ catalyst in the ethane oxidative dehydrogenation reaction", 4th Panhellenic Chemical Engineering Conference, Patras (Greece), May 29-31, 2003
- D41. **E. Heracleous**, A.A. Lemonidou, "Development of tailored catalytic materials for the efficient production of lower alkenes", 3rd Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean, Thessaloniki (Greece), May 13-15, 2003
- D42. **E. Heracleous**, A.A. Lemonidou, I.A. Vasalos, "Oxidative dehydrogenation of ethane over alumina-supported molybdena catalysts", 7th Panhellenic Catalysis Symposium, Edessa (Greece), October 4-5, 2002
- D43. **E. Heracleous**, M. Machli, A.A. Lemonidou, "Oxidative Dehydrogenation of Ethane and Propane over V Supported Catalysts. Effect of Support and Promoters", Euroconference on Structure and Reactivity of Oxide Surfaces, Acquafredda di Maratea (Italy), June 1-6, 2002
- D44. M. Machli, **E. Heracleous**, A.A. Lemonidou, "Propane Oxidative Dehydrogenation over Vanadia Supported Catalyst Promoted with Magnesia", 5th European Congress in Catalysis, Limerick (Ireland), September 2-7, 2001

6.5. Workshop presentations

- E1. **E. Heracleous**, A. Lappas, S. Berzergianni, I.A. Vasalos, “Production of biofuels with respect to environmental commitments”, Workshop on Energy & Environment co-organized by the Academy of Athens, NTUA and CRES, Athens (Greece), 4 April, 2008
- E2. **E. Heracleous**, “SUSTAINABLE FUELUBE: Life Cycle Analysis for Assessment of Alternative Fuels for Non-transport Applications”, 3rd Annual Shell Sustainable Fuelube Workshop, Marie-Curie Fellowship Conference, Chester (UK), March 17-20, 2008
- E3. **E. Heracleous**, “SUSTAINABLE FUELUBE: Life Cycle Analysis for Assessment of Biofuels for Non-transport Applications”, 2nd Annual Shell Sustainable Fuelube Workshop, Marie-Curie Fellowship Conference, Chester (UK), March 19-23, 2007
- E4. A. Delimitis, A.A. Lemonidou, **E. Heracleous**, L. Nalbandian, “Nanostructural investigation of highly active Ni-Nb-O catalysts for ethane oxidative dehydrogenation”, 3rd Workshop on Nanosciences & Nanotechnologies – NN06, Thessaloniki (Greece), July 10-12, 2006
- E5. **E. Heracleous**, “Development of Alternative Heating Fuels: Shell Global Solutions - CERTH collaboration”, 1st Annual Shell Sustainable Fuelube Workshop, Marie-Curie Fellowship Conference, Chester (UK), March 20-24, 2006
- E6. **E. Heracleous**, A.A. Lemonidou, “Ethylene production via oxidative dehydrogenation in the presence of nickel catalysts”, 2nd CPERI Scientific Workshop: Research activities of CPERI in the areas of advanced materials, energy production systems and environment, Thessaloniki (Greece), December 15-16, 2004

6.6. Teaching notes

- F1. A.A. Lemonidou, E. Heracleous, “*Biofuels: Production processes - Properties - Uses*”, Teaching notes for the elective course *Liquid Fuel Processes* of the Department of Chemical Engineering, AUTH