Curriculum Vitae
Research and Scientific Activity
Dr George Avgouropoulos
Di George Avgouropoulos
Last updated: October 2020

BRIEF CURRICULUM VITAE

PERSONAL

Name/Surname: George Avgouropoulos

Father's name: Athanasios

Mother's name: Harikleia

Date of birth: 11/07/1974

Place of birth: Athens

Nationality: Hellenic

Marital status: Married (two children)

Home address: Andrea Papandreou 13, Patras, GR-26332

Tel.: +30 2611 110735, Mobile: +30 6973216076

Office address: Department of Materials Science

University of Patras, Rio, GR-26504, Patras, Greece

Tel.: +30 2610 996312

E-mail: geoavg@upatras.gr

EDUCATION

1992-1997 University of Patras, Patras, Greece,

Diploma in Chemical Engineering, October 1997, Grade: 7.03/10.00

Diploma Thesis: "In vitro calcification of bioprosthetic heart valves"

Advisor: Prof. P.G. Koutsoukos

1997-2000 Department of Chemical Engineering, University of Patras & FORTH/ICE-HT,

Patras, Greece

M.Sc. in Energy and Environment, University of Patras

Thesis: "CuO-CeO₂ catalysts for application in fuel processors"

Advisor: Prof. X.E. Verykios

1997-2003 Department of Chemical Engineering, University of Patras & FORTH/ICE-HT,

Patras, Greece

Ph. D in Chemical Engineering, University of Patras (Date of Ph. D defense:

July 2003)

Thesis: "Development of a catalytic process for the selective catalytic oxidation

of CO in the presence of excess hydrogen"

Advisor: Prof. X.E. Verykios

FELLOWSHIPS/AWARDS/DISTINCTIONS

Feb. 1998 – Jul. 2003 Postgraduate Fellow of FORTH/ICE-HT, Patras, Greece

Feb. 2006 - Feb. 2007 Postdoctoral Fellowship (State Scholarship Foundation,

Greece)

Jun. 2006 The paper No. 3 (G. Avgouropoulos et al. Catal. Today 75

(2002) 157-167", has been recognised in the "Top-50 most cited

articles" as published in in Elsevier's Catalysis journals 2001

2005 (as cited by Scopus)

Jun. 2007 The paper No. 3 (G. Avgouropoulos et al. Catal. Today 75

(2002) 157-167", has been recognised in the "Top-50 most cited

articles" as published in in Elsevier's Catalysis journals 2002

2006 (as cited by Scopus)

Jun. 2008 The paper No. 4 (G. Avgouropoulos et al. Appl. Catal. A: Gen.

244 (2003) **155-167**", has been recognised in the "Top-50 most

cited articles" as published in in Elsevier's Catalysis journals

2003-2007 (as cited by Scopus)

Sep. 2014 Best poster award for the work: "Pt/TiO₂ and Pt/CeO₂

nanostructured materials for fuel cell applications" presented by

A. Paxinou (post-graduate student under my supervision) at the

30th Panhellenic Conference on Solid-State Physics and Materials

Science, Heraklion, Crete, Greece, 21-24 September, 2014.

Jul. 2016 Young Researcher Award given to P. Angelopoulou (Ph.D.

student under my supervision) for best oral presentation of the

work: "Combustion-synthesized LiMn-based spinel nanostructures

as cathode materials for lithium-ion batteries nanostructured

materials for fuel cell applications" during the 13th International

Conference on Nanosciences & Nanotechnologies (NN16)

EMPLOYMENT/OCCUPATION

Feb. 1998 – Jul. 2003 Postgraduate researcher of FORTH/ICE-HT, Patras, Greece

Jul. 2003 – Dec. 2016 Collaborating researcher of FORTH/ICE-HT, Patras, Greece

Sept. 2005 – Jul. 2010 Assistant Professor, Department of Agricultural Products

Technology, School of Agricultural Technology, Technological

Educational Institution of Kalamata, Greece

Oct. 2008 – Aug. 2013 Lecturer (fixed term), Department of Materials Science

University of Patras, Greece

Sept. 2009 – Dec. 2009 Consultant of ADVENT TECHNOLOGIES S.A. (development

of innovative materials for fuel cells)

Jan. 2014 – Sep. 2016 Lecturer in the field of: "Materials engineering in

microphase-nanophase or/and molecular or/and biomolecular

materials or/and devices – experimental direction"

Department of Materials Science, University of Patras, Greece

Oct. 2016 – Oct. 2020 Assistant Professor in the field of: "Materials engineering in

 $microphase-nanophase\ materials\ or/and\ devices-experimental$

direction", Dep. Of Materials Science, Univ. of Patras, Greece

Oct. 2020 – today Associate Professor in the field of: "Materials engineering

in microphase-nanophase materials and devices for energy chemical

technologies", Dep. of Materials Science, Univ. of Patras, Greece

TEACHING EXPERIENCE

Undergraduate Programs

- "Electronic Materials Production Processes" (teaching assistant), core course of 3rd year, Chemical Engineering Department, University of Patras (1997-1998).
- "Organic Chemistry Laboratory", (teaching assistant), core course of 2nd year, Chemical Engineering Department, University of Patras (1998-2000).
- "Polymers Laboratory" (teaching assistant), core course of 3rd year, Chemical Engineering Department, University of Patras (1998-2000).
- "Physicochemical & Instrumental Analysis of Vegetative Products" core course of 2nd year, Department of Agricultural Products Technology, School of Agricultural Technology, Technological Educational Institution of Kalamata (2005-2010).
- "Topics in Industrial and Technological Applications of Materials I", optional course of 4th year, Department of Materials Science, University of Patras (winter semesters 2008/2009, 2009/2010, 2010/2011, 2011/2012, 2012/2013, 2013/2014).
- "Topics in Industrial and Technological Applications of Materials II", optional course of 4th year, Department of Materials Science, University of Patras (spring semesters 2008-2013, 2018/2019).
- "Materials Science Laboratory III", core course of 2nd year, Department of Materials Science, University of Patras (spring semesters 2008-2018).
- "Physical Chemistry Laboratory", core course of 3nd year, Department of Materials Science, University of Patras (winter semesters 2009-2020).
- "Materials Science Laboratory I", core course of 1st year, Department of Materials Science, University of Patras (spring semesters 2010/2011, 2012/2013, 2017-2020).
- "Materials and Environment", optional course of 3rd year, Department of Materials Science, University of Patras (spring semesters 2010-2017, winter semesters 2019-2020).

- "Chemistry III", core course of 3rd year, Department of Materials Science, University of Patras (winter semesters 2010-2013).
- "Physics Laboratory II", core course of 1st year, Department of Materials Science, University of Patras (spring semester 2011/2012).
- "Chemistry Laboratory I", core course of 1st year, Department of Materials Science, University of Patras (winter semesters 2012-2017).
- "Chemistry Laboratory", core course of 1st year, Department of Materials Science, University of Patras (spring semesters 2017-2020).
- "Chemistry I", core course of 1st year, Department of Materials Science, University of Patras (winter semester 2016-2020).
- "Materials for Renewable Energy", optional course of 4th year, Department of Materials Science, University of Patras (spring semesters 2013-2018).
- "Physical Chemistry", core course of 2nd year, Department of Materials Science, University of Patras (winter semesters 2014-2020).
- "Materials for Catalytic Processes", optional course of 4th year, Department of Materials Science, University of Patras (spring semester 2019/2020).
- Supervisor of several research diploma thesis (>25)

Postgraduate (MSc and PhD) Programs

- "Environmental Applications & Impacts of Nanotechnology", optional course of Interdisciplinary Postgraduate Program on "Environmental Sciences", University of Patras (winter semester 2015/2016, 2019/2020).
- "Design, Synthesis and Processing of Advanced Materials", core course of 1st year, Postgraduate Program of Materials Science Department, University of Patras (spring semester 2014/2015, 2015/2016, 2016/2017, 2017/2018, 2018/2019).
- "Micro/Nano-Technology of Materials", core course of 1st year, Postgraduate Program of Materials Science Department, University of Patras (2018/2019, 2019/2020, 2020/2021).
- Supervisor of the Master Diploma Thesis of Pinelopi Angelopoulou, "Development of Li-Mn spinel nanostructures for energy applications", Department of Materials Science, University of Patras, 2015.
- Supervisor of the Master Diploma Thesis of Alexandra Paxinou, "Development of Pt/CeO₂ and Pt/TiO₂ nanostructured catalysts for the production of hydrogen from methanol",
 Department of Materials Science, University of Patras, 2015.
- Supervisor of the Master Diploma Thesis of Konstantinos Kappis (Caratheodori

- **scholarship; University of Patras program**), "Effect of the synthesis parameters of hydrothermal method on the catalytic properties of nanoceria", Department of Materials Science, University of Patras, 2018.
- Supervisor of the Master Diploma Thesis of Christos Tapeinos, "Photoelectrocatalytic production of hydrogen", Department of Materials Science, University of Patras, July 2020.
- Supervisor of the PhD Thesis of Pinelopi Angelopoulou (<u>HFRI scholarship</u>), "Development of anodic and cathodic nanostructured materials for lithium batteries applications", Department of Materials Science, University of Patras, 2016-today (Date of defense: March 2020).
- Supervisor of the PhD Thesis of Christos Papadopoulos (<u>Caratheodori scholarship</u>; <u>University of Patras program</u>), "Tuning the physicochemical properties of nanostructured copper-cerium catalysts via a hydrothermal method", Department of Materials Science, University of Patras, (ongoing).
- Supervisor of the PhD Thesis of Konstantinos Kappis, "Development of catalytic methanol processors for application in high temperature fuel cells", Department of Materials Science, University of Patras (ongoing).

Other Programs

"Modern materials for renewable energy sources" & "XRF, XPS and AES", Program for Knowledge Updating of University Graduates entitled "Materials Science for Advanced Technologies", Department of Materials Science, University of Patras (02/2015-09/2015)

PROFESSIONAL SOCIETIES AND ACTIVITIES

Reviewer in 35 international journals (ISI-Journal Citation Reports 2020):
 ... of Elsevier...

Journal of Catalysis, Catalysis Communications, Applied Catalysis A: General, Applied Catalysis B: Environmental, International Journal of Hydrogen Energy, Fuel Processing Technology, The Chemical Engineering Journal, Journal of Colloid and Interface Science, Journal of Physics and Chemistry of Solids, Journal of Alloys and Compounds, Ceramics International, Electrochimica Acta, Materials Science in Semiconductor Processing, Energy Conversion and Management, Applied Surface Science, Catalysis Today, Journal of Power Sources, Journal of Molecular Catalysis A: Chemical, Renewable Energy, Applied Energy

```
... of Springer ...
```

Catalysis Letters, ... of Wiley ...

Energy Science & Engineering, ChemSusChem, ChemCatChem

... of ACS ...

Journal of the American Chemical Society, ACS Applied Materials & Interfaces, The Journal of Physical Chemistry, ACS Applied Nanomaterials, Industrial & Engineering Chemistry Research

... of MDPI ...

Catalysts, Energies, Processes, Nanomaterials, Materials, Sensors

- Romanian Research Council reviewer
- Hong-Kong Research Council reviewer
- Polish Research Council Reviewer
- Greek GSRT reviewer
- Editorial Board Member, The Open Environmental Engineering Journal (Bentham Science), 2008-
- Editorial Board Member, FRONTIERS, 2008-
- Editorial Board Member, Energies, (MDPI), 2019-
- Editor of Book: "Environmental catalysis over gold-based materials", RSC, August 2013.
- Guest Editor of SI: Tuning the Physicochemical Properties of Nanostructured Materials
 Through Advanced Preparation Methods (Nanomaterials, MDPI, 2020)
- Technical Chamber of Greece
- Association of Greek Chemical Engineers
- Hellenic Catalysis Society
- Session Chair, 4th EFCATS School on Catalysis, St. Petersburg, Russia, 2006.
- Session Chair, 9th Panhellenic Catalysis Symposium, Leykada, Greece, 2006.
- Member of the Organizing Committee, Meeting for Materials Science & Industry, 10 years of operation of the Department of Materials Science, Patras, Greece, June 1st, 2010.
- Session Chair, XIX International Conference on Chemical Reactors, September 5-9, 2010,
 Vienna, Austria.
- Session Chair, 12th Panhellenic Catalysis Symposium, Chania, Greece, 2012.
- Member of the Scientific Committee, 12th Panhellenic Catalysis Symposium, Chania, Greece, 2012.

- Member of the Scientific Committee, 13th Panhellenic Catalysis Symposium, Palaios Agios Athanasios Pellas, Greece, 2014.
- Session Chair, 10th Panhellenic Conference on Chemical Engineering, Patras, Greece, 2015.
- Member of the Scientific Committee, "Innovative Manufacturing Engineering & Energy International Conference, IManEE 2016, Kallithea Chalkidiki, Greece, 2016
- Member of the Scientific Committee, 14th Panhellenic Catalysis Symposium, Patras, Greece, 2016.
- Member of the Organizing Committee, 14th Panhellenic Catalysis Symposium, Patras, Greece, 2016.
- Session Chair, EMN Dubai Meeting, Energy Materials Nanotechnology, Dubai, United Arab Emirates, 2016.
- Member of the Scientific Committee, 15th Panhellenic Catalysis Symposium, Ioannina, Greece, 2018.
- Session Chair, 15th Panhellenic Catalysis Symposium, Ioannina, Greece, 2018.
- Member of the Scientific Committee, Virtual Conference of Young Scientists: Mineral Resources-Environment-Chemical Engineering, Kozani, Western Macedonia, Greece, 2021.
- Member of the Organizing Committee, 8th International Conference on micro and nanosciences and nanotechnologies (Micro&Nano2020), Patras, Greece, 2021.
- Member of the Scientific Committee, 16th Panhellenic Catalysis Symposium, Chania, Greece, 2021.

ADMINISTRATIVE ACTIVITIES

- Member of the General Assembly in the Department of Materials Science (University of Patras, 2014-today)
- Member of several committees in the Department of Materials Science (University of Patras): Coordination of Research Proposals, Public Relations and Promotion (Seminars coordinator until 2018), Infrastructure and Laboratory Operation (-today), Finance (2018today, coordinator), Health & Safety (2019-today, coordinator)
- Member of Interdisciplinary Committee of Interdisciplinary Postgraduate Program on "Environmental Sciences", University of Patras (2015-today)

INVITED TALKS

- Nov. 2007 "Copper-based catalysts for methanol processors", Institute of Catalysis, Bulgarian Academy of Sciences, Sofia Bulgaria, 26 November 2007.
- Sept. 2010 "Development of an Internal Reforming Methanol Fuel Cell: Concept,
 Challenges and Opportunities", Keynote presentation, XIX International
 Conference on Chemical Reactors, September 5-9, 2010, Vienna, Austria.
- Nov. 2014 "Catalytic and Technological Aspects of Reforming Methanol to Electricity Inside a Fuel Cell", Keynote presentation, 2014 AIChE Annual Meeting, November 16-21, 2014, Atlanta, USA.
- Apr. 2016 "Technological aspects of internal reforming methanol fuel cells for portable applications", Invited, EMN Dubai Meeting, Energy Materials Nanotechnology, Dubai, United Arab Emirates, April 1-4, 2016.
- May 2018 "Development of a Portable Internal Reforming Methanol High

 Temperature PEM Fuel Cell System", Invited, Hydrogen Innovation Festival,

 Tomar, Portugal, May 29th, 2018.
- Nov. 2021 "Tuning the Catalytic Properties of Copper-promoted Nanoceria",
 Keynote presentation, 16th Panhellenic Catalysis Symposium, Chania, Greece,
 2021.

RESEARCH ACTIVITY

- (A) Synthesis and characterization of nanomaterials
- (B) Heterogeneous nanocatalysts
- (C) Alternative energy sources: Catalytic hydrogen technologies
- (D) Environmental catalytic chemical processes
- (E) Development of Internal Reforming Methanol Fuel Cell systems
- (F) Development of nanostructured electrodes for Li-ion and Na-ion batteries
- Nanomaterials: Synthesis and characterization
 Preparation of nanostructured oxides (especially mixed oxides CuCeO_x and spinel oxides CuMnO_x) and precious metal-based catalysts (i.e. Au/Fe₂O₃, Au/CeO₂, Pt/CeO₂, Pt/Al₂O₃

and ((Pt, Au, PtAu, CuO, CuCeOx)/CNTs/Graphene) and LiMn₂O₄-based nanostructured spinels via various chemical methods (impregnation, coprecipitation, sol-gel, and especially hydrothermal and combustion methods). Materials characterization by atomic adsorption spectroscopy (AAS), N₂ adsorption, X-ray powder diffraction (XRD), electron microscopy (TEM, SEM), X-ray photoelectron spectroscopy (XPS), thermogravimetric analysis (TGA), electrochemical impedance spectroscopy (EIS), polarization measurements, transient-isotopic methods (SSITKA) and temperature-programmed methods (TPR, TPD). (Published papers 1-61).

- Catalytic processes for the production and purification of hydrogen for fuel cell applications: a) Production of hydrogen via steam reforming of methanol, b) Water-gas shift reaction, c) Removal of CO from hydrogen-rich mixtures via preferential CO oxidation. (Published papers 1, 3, 4, 5, 7, 9, 11-15, 17-29, 32, 33, 34, 36, 37, 39, 40, 43, 44-46, 48, 49-53).
- Environmental catalysis for air pollution control (CO and VOCs abatement): Catalytic oxidation of CO and ethanol. (Published papers 1, 10, 16, 31, 32, 47, 53).
- Development of a single methanol-fuelled power unit (Internal Reforming Alcohol Fuel Cell) based on a methanol reformer and a high temperature PEM fuel cell. Incorporation of a methanol reforming catalyst into the anodic compartment (bi-functional anode) of a high-temperature, polymer electrolyte fuel cell (HT-PEMFC), so that methanol reforming takes place inside the fuel cell stack (internal reforming), (Published papers 28, 33, 34, 35, 37, 39, 40, 43, 49).
- *Photoelectrocatalytic processes.* Degradation of organic pollutants (published paper 47). Production of hydrogen (published papers 46 and 51)
- *Nanostructured electrodes for Li-ion and Na-ion batteries*. LiMn₂O₄-based nanostructured spinels (Published papers 41, 54-59, 61), graphene- and biochar-based electrodes.

PARTICIPATION/COORDINATION OF RESEARCH PROJECTS (1998-today)

Participation (preparation, submission, execution, report, management) in several research projects financed either by the Greek Ministry of Development or EC. These include a number of Joint research and technological programmes between Greece and Slovenia (1998-2001, "Preferential oxidation of carbon monoxide", "Characterization of electrocatalysts", "Development of metal-doped molecular sieves") Czech Republic (2001-2003, "Catalytic oxidation of VOCs"), Bulgaria (2005-2007, "Methanol reforming and water-gas shift activity of

gold and copper-based catalysts") and Poland (2006-2008, "Catalytic steam reforming of ethanol"). In addition, the following research projects (lab budget > 1 million euros) were (are) funded:

by EC:

- EPAN E-25 entitled "**Development of a methanol fuelled fuel cell system**" (01-07-2004 to 31-10-2005)
- HY2SEPS entitled "Hybrid hydrogen-carbon dioxide separation systems" (01-02-2006 to 31-05-2008)
- APOLLON-B entitled "Polymer electrocatalysts and non noble metal electrocatalysts for high temperature PEM fuel cells" (15-09-2008 to 31-07-2009)
- IRAFC (senior researcher; total budget: 2.53 m€) entitled "Development of an Internal Reforming Alcohol High Temperature PEM Fuel Cell Stack" (01-01-2010 to 30-06-2013)
- IRMFC (<u>scientific coordinator</u>; total budget: 3.26 m€) entitled "Development of a
 Portable Internal Reforming Methanol High Temperature PEM Fuel Cell System"
 (01-05-2013 to 31-10-2016)

by GSRT:

- ISuMaRe4PV (<u>senior researcher</u>; Research-Create-Innovate, Call A; total budget: 998,280€ (906,624€ funded by GSRT) entitled "Integrated PV Surveillance, Management and Revitalization System" (10/2018 to 09/2021)
- METHCELL (<u>scientific coordinator</u>; bilateral programme Greece-China; total budget: 442,500 € (400k€ funded by GSRT) entitled "A reformed methanol fuel cell based on intermediate-temperature molten proton conductor electrolyte" (10/2019 to 9/2022)
- BaNaNa (<u>scientific coordinator</u>; Research-Create-Innovate, Call B; total budget: 998,280€ (906,624€ funded by GSRT) entitled "Development of Sodium-ion batteries based on naturally derived anode materials" (7/2020 to 1/2023)

by HFRI:

• Scholarship for PhD studies (No2257; 1st Call of HFRI), budget: 18,900 € (funded by Hellenic Foundation for Research and Innovation) entitled "**Development of anodic and cathodic nanostructured materials for lithium batteries**" (8/2017 to 11/2018)

by University of Patras

• C. Caratheodory 2015: NANOKAT (<u>scientific coordinator</u>; total budget: 30000€ (funded by Research Committee of University of Patras) "**Tuning the physicochemical**

properties of nanostructured copper-cerium catalysts via a hydrothermal method" (7/2016 to 9/2019)

PUBLICATIONS/PRESENTATIONS

A. Publications in peer-reviewed international journals: 61

Citations (Scopus, October 2020): 3968 (Scopus)

4789 (Google Scholar)

h index (October 2020): 28 (Scopus)

28 (Google Scholar)

B. Presentations-publications in international conferences: 54

C. Presentations-publications in national conferences: 41

D. Patents: 2

E. Books (book chapters):

F. Thesis: 3

A. PUBLICATIONS IN PEER-REVIEWED INTERNATIONAL JOURNALS

G. Avgouropoulos, T. Ioannides, H. Matralis, J. Batista, S. Hocevar, "CuO – CeO₂
mixed oxide catalysts for the selective oxidation of carbon monoxide in excess hydrogen"

Catal. Lett. 73 (2001) 33-40.

Impact factor: 2.482, Times cited: 253

Second most cited article among the research articles published in Catalysis Letters in 2001.

A. Ristic, <u>G. Avgouropoulos</u>, T. Ioannides, V. Kaucic, "Investigation
of catalytic activity of framework and extraframework cobalt and manganese in
MeAPO-34 prepared from fluoride medium"

Stud. Surf. Sci. Catal. 135 (2001) 314.

Impact factor: 0.307, Times cited: 1

 G. Avgouropoulos, T. Ioannides, C. Papadopoulou, J. Batista, S. Hocevar, H. Matralis, "A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO-CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen"

Catal. Today 75 (2002) 157-167. Impact factor: 5.825, Times cited: 492

Most cited article among the research articles published in Catal. Today in 2002. Recognised in the "Top-50 most cited articles" as published in Elsevier's Catalysis Journals 2001-2005 and 2002-2006 (as cited by Scopus).

4. **G. Avgouropoulos**, T. Ioannides, "Selective CO oxidation over CuO-CeO₂ catalysts prepared via the urea-nitrate combustion method"

Appl. Catal. A: Gen. 244 (2003) 155-167.

Impact factor: 5.006, Times cited: 525

Most cited article among the research articles published in Appl. Catal. A in 2003. Recognised in the "Top-50 most cited articles" as published in Elsevier's Catalysis Journals 2003-2007 (as cited by Scopus).

5. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Production of hydrogen via combined steam reforming of methanol over CuO-CeO₂ catalysts"

Catal. Commun. 5 (2004) 231-235.

Impact factor: 3.612, Times cited: 91

Featured on the ScienceDirect TOP25 Hottest Articles (2004) within Catal. Commun.

Fourth most cited article among the research articles published in Catal. Commun. in 2004.

6. A. Machocki, T. Ioannides, B. Stasinska, W. Gac, <u>G. Avgouropoulos</u>, D. Delimaris, W. Grzegorczyk, S. Pasieczna, "Manganese-lanthanum oxides modified with silver for the catalytic combustion of methane"

J. Catal. 227 (2004) 282-296.

Impact factor: 7.918, Times cited: 285

7. <u>G. Avgouropoulos</u>, T. Ioannides, H. Matralis, "Influence of the preparation method on the performance of CuO-CeO₂ catalysts for the selective oxidation of CO"

Appl. Catal. B: Environ. 56 (2005) 87-93.

Impact factor: 16.683, Times cited: 361

Third most cited article among the research articles published in Appl. Catal. B in 2005.

8. G. Avgouropoulos, T. Ioannides, "CO tolerance of Pt and Rh catalysts: effect of CO in

the gas phase oxidation of H₂ over Pt and Rh supported catalysts"

Appl. Catal. B: Environ. 56 (2005) 77-86.

Impact factor: 16.683, Times cited: 31

9. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Steam reforming of methanol over copper-manganese spinel oxide catalysts"

Catal. Commun. 6 (2005) 497-501.

Impact factor: 3.612, Times cited: 89

 $Featured \ on \ the \ Science Direct \ TOP 25 \ Hottest \ Articles \ (2005) \ within \ Catal.$

Commun.

10. **G. Avgouropoulos***, E. Oikonomopoulos, D. Kanistras, T. Ioannides, "Complete oxidation of ethanol over alkali-promoted Pt/Al₂O₃ catalysts"

Appl. Catal. B: Environ., 65 (2006) 62-69.

Impact factor: 16.683, Times cited: 94

11. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "In-situ combustion synthesis of structured Cu-Ce-O and Cu-Mn-O catalysts for the production and purification of hydrogen"

Appl. Catal. B: Environ. 66 (2006) 168-174.

Impact factor: 16.683, Times cited: 94

Featured on the ScienceDirect TOP25 Hottest Articles (2006) within Appl. Catal. B.

12. **G. Avgouropoulos**, T. Ioannides, "Effect of synthesis parameters on catalytic properties of CuO-CeO₂"

Appl. Catal. B: Environ. 67 (2006) 1-11.

Impact factor: 16.683, Times cited: 223

Featured on the ScienceDirect TOP25 Hottest Articles (2006) within Appl. Catal. B.

13. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Effect of dopants on the performance of CuO-CeO₂ catalysts in methanol steam reforming"

Appl. Catal. B: Environ. 69 (2007) 226-234.

Impact factor: 16.683, Times cited: 95

14. **G. Avgouropoulos***, J. Papavasiliou, V. Idakiev, T. Tabakova, T. Ioannides, "A comparative study of ceria-supported gold and copper oxide catalysts for preferential CO oxidation reaction"

Chem. Eng. J. 124 (2006) 41-45.

Impact factor: 10.652, Times cited: 93

Featured on the ScienceDirect TOP25 Hottest Articles (2006) within Chem. Eng. J.

15. T. Tabakova, V. Idakiev, J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Effect of additives on the WGS activity of combustion synthesized CuO/CeO₂ catalysts" *Catal. Commun.* 8 (2007) 101-106.

Impact factor: 3.612, Times cited: 81

16. M. Konsolakis, M. Vrontaki, <u>G. Avgouropoulos</u>, T. Ioannides, I.V. Yentekakis, "Novel doubly-promoted catalysts for the lean NO_x reduction by H₂ + CO: Pd(K)/Al₂O₃-(TiO₂)"

Appl. Catal. B: Environ. 68 (2006) 59-67.

Impact factor: 16.683, Times cited: 19

17. P. Panagiotopoulou, J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, D.I. Kondarides, "Water-gas shift activity of doped Pt/CeO₂ catalysts"

Chem. Eng. J. 134 (2007) 16-22.

Impact factor: 10.652, Times cited: 125

Featured on the ScienceDirect TOP25 Hottest Articles (2007) within Chem. Eng. J.

18. **G. Avgouropoulos**, T. Ioannides, "Adsorption and reaction of CO on CuO-CeO₂ catalysts prepared by the combustion method"

Catal. Lett. 116 (2007) 15-22.

Impact factor: 2.482, Times cited: 33

19. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Combined steam reforming of methanol over Cu-Mn spinel oxide catalysts"

J. Catal. 251 (2007) 7-20.

Impact factor: 7.918, Times cited: 148

20. **G. Avgouropoulos***, J. Papavasiliou, T. Ioannides, "PROX reaction over CuO-CeO₂ catalyst with reformate gas containing methanol"

Catal. Commun. 9 (2008) 1656-1660.

Impact factor: 3.612, Times cited: 23

21. <u>G. Avgouropoulos</u>*, M. Manzoli, F. Boccuzzi, T. Tabakova, J. Papavasiliou, T. Ioannides, V. Idakiev, "Catalytic performance and characterization of Au/doped ceria catalysts for the preferential CO oxidation reaction"

J. Catal. 256 (2008) 237-247.

Impact factor: 7.918, Times cited: 132

Featured on the ScienceDirect TOP25 Hottest Articles (2008) within J. Catal.

22. T. Tabakova, V. Idakiev, J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Impact of the preparation method on the water-gas shift activity of CuO/doped-ceria catalysts" *Bulg. Chem. Commun.* 40 (2008) 42-47.

Impact factor: 0.640, Times cited: 1

23. M. Manzoli, <u>G. Avgouropoulos</u>, T. Tabakova, J. Papavasiliou, T. Ioannides, F. Boccuzzi, "Preferential CO oxidation reaction in H₂-rich gas mixtures over Au/doped ceria catalysts"

Catal. Today 138 (2008) 239-243.

Impact factor: 5.825, Times cited: 56

Featured on the ScienceDirect TOP25 Hottest Articles (2009) within Catal. Today.

24. **G. Avgouropoulos**, T. Ioannides, "TPD and TPSR study of CO interaction with CuO-CeO₂ catalysts"

J. Mol. Catal. A 296 (2008) 47-53.

Impact factor: 3.958, Times cited: 33

25. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Steady-state isotopic transient kinetic analysis of steam reforming of methanol over Cu-based catalysts"

Appl. Catal. B: Environ. 88 (2009) 490-496.

Impact factor: 16.683, Times cited: 43

26. **G. Avgouropoulos***, "Isotopic transient study of methanol decomposition over noble metal/ceria"

Catal. Commun. 10 (2009) 682-686.

Impact factor: 3.612, Times cited: 7

27. **G. Avgouropoulos***, J. Papavasiliou, T. Ioannides, "Hydrogen production from methanol over combustion-synthesized noble metal/ceria catalysts"

Chem. Eng. J. 154 (2009) 274-280.

Impact factor: 10.652, Times cited: 33

28. **G. Avgouropoulos***, J. Papavasiliou, M. Daletou, T. Ioannides, J. Kallitsis, S. Neophytides, "Reforming methanol to electricity in a high temperature PEM fuel cell" *Appl. Catal. B: Environ.* 90 (2009) 628-632.

Impact factor: 16.683, Times cited: 42

29. T. Tabakova, <u>G. Avgouropoulos</u>, J. Papavasiliou, M. Manzoli, F. Boccuzzi, K. Tenchev, F. Vindigni, T. Ioannides, "CO-free hydrogen production over Au/CeO₂–Fe₂O₃ catalysts: Part 1. Impact of the support composition on the performance for the preferential CO oxidation reaction"

Appl. Catal. B: Environ. 101 (2011) 256-265.

Impact factor: 16.683, Times cited: 82

30. H. Nazar, D.G. Fatouros, S.M. van der Merwe, N. Bouropoulos, <u>G. Avgouropoulos</u>, J. Tsibouklis, M. Roldo, "Thermosensitive hydrogels for nasal drug delivery: The formulation and characterisation of systems based on N-trimethyl chitosan chloride" *Eur. J. Pharm. Biopharm.* 77 (2011) 225-232.

Impact factor: 4.604, Times cited: 72

31. T. Skaltsas, <u>G. Avgouropoulos</u>, D. Tasis, "Impact of the fabrication method on the physicochemical properties of carbon nanotube-based aerogels"

Micropor. Mesopor. Mater. 143 (2011) 451-457.

Impact factor: 4.551, Times cited: 27

32. **G. Avgouropoulos**, T. Ioannides, "Kinetics of CO and H₂ oxidation over CuO–CeO₂ and CuO catalysts"

Chem. Eng. J. 176-177 (2011) 14-21.

Impact factor: 10.652, Times cited: 10

33. <u>G. Avgouropoulos*</u>, T. Ioannides, J.K. Kallitsis, S. Neophytides, "Development of an internal reforming alcohol fuel cell: Concept, challenges and opportunities"

Chem. Eng. J. 176-177 (2011) 95-101.

Impact factor: 10.652, Times cited: 28

34. J. Papavasiliou, <u>G. Avgouropoulos*</u>, T. Ioannides, "CuMnOx catalysts for internal reforming methanol fuel cells: Application aspects"

Int. J. Hydrogen Energy 37 (2012) 16739-16747.

Impact factor: 4.939, Times cited: 18

35. **G. Avgouropoulos***, S. Neophytides, "Performance of internal reforming methanol fuel cell under various methanol/water concentrations"

J. Appl. Electrochem. 42 (2012) 719-726.

Impact factor: 2.384, Times cited: 18

36. T. Tabakova, V. Idakiev, <u>G. Avgouropoulos</u>, J. Papavasiliou, M. Manzoli, F. Boccuzzi, T. Ioannides, "Highly active copper catalyst for low-temperature water-gas shift reaction prepared via a Cu-Mn spinel oxide precursor"

Appl. Catal. A: Gen. 451 (2013) 184-191.

Impact factor: 5.006, Times cited: 35

37. **G. Avgouropoulos***, A. Paxinou, S. Neophytides, "In situ hydrogen utilization in an internal reforming methanol fuel cell"

Int. J. Hydrogen Energy 39 (2014) 18103-18108.

Impact factor: 4.939, Times cited: 29

38. P. Stathi, Y. Deligiannakis, <u>G. Avgouropoulos</u>, M. Louloudi, "Efficient H₂ Production from Formic Acid by a Supported Iron Catalyst on Silica"

Appl. Catal. A: Gen. 498 (2015) 176-184.

Impact factor: 5.006, Times cited: 15

39. <u>G. Avgouropoulos*</u>, J. Papavasiliou, T. Ioannides, S. Neophytides "Insights on the effective incorporation of a foam-based methanol reformer in a high temperature polymer electrolyte membrane fuel cell"

J. Power Sources 296 (2015) 335-343.

Impact factor: 8.247, Times cited: 15

40. **G. Avgouropoulos***, S. Schlicker, K.-P. Schelhaas, J. Papavasiliou, K. Papadimitriou, E. Theodorakopoulou, N. Gourdoupi, A. Machocki, T. Ioannides, J. Kallitsis, G. Kolb, S. Neophytides "Performance evaluation of a proof-of-concept 70 W internal reforming methanol fuel cell system"

J. Power Sources 307 (2016) 875-882.

Impact factor: 8.247, Times cited: 17

41. P. Angelopoulou, F. Paloukis, G. Słowik, G. Wójcik, <u>G. Avgouropoulos*</u> "Combustion-synthesized Li_xMn₂O₄-based spinel nanorods as cathode materials for lithium-ion batteries"

Chem. Eng. J. 311 (2017) 191-202.

Impact factor: 10.652, Times cited: 16

42. V. Tzitzios, X. Hu, K. Dimos, D. Gournis, V. Georgakilas, <u>G. Avgouropoulos</u>, M.S. Katsiotis, S.M. Alhassan, G. Hadjipanayis "Uniform growth of fct FePt nanoparticles on the surface of reduced-GO via a green facile approach. Ferromagnetic r-GO nanocomposites with high coercivity and surface area"

Carbon 121 (2017) 209-216.

Impact factor: 8.821, Times cited: 1

43. J. Papavasiliou, G. Słowik, **G. Avgouropoulos*** "Redox behaviour of a copper-based methanol reformer"

Energy Technol. 6 (2018) 1332-1341.

Impact factor: 3.163, Times cited: 5

44. J. Papavasiliou, M. Rawski, J. Vakros, <u>G. Avgouropoulos*</u> "A novel post-synthesis modification of CuO-CeO2 catalysts: effect on their activity for selective CO oxidation reaction"

ChemCatChem 10 (2018) 2016-2106.

Impact factor: 4.853, Times cited: 16

45. J. Papavasiliou, J. Vakros, <u>G. Avgouropoulos*</u> "Impact of acid treatment of CuO-CeO2 catalysts on the preferential oxidation of CO reaction"

Catal. Commun. 15 (2018) 68-72.

Impact factor: 3.612, Times cited: 8

46. E. Doukas, P. Balta, D. Raptis, <u>G. Avgouropoulos</u>, P. Lianos "A Realistic Approach for Photoelectrochemical Hydrogen Production"

Materials 11 (2018) 1269.

Impact factor: 3.057, Times cited: 8

47. I. Papagiannis, G. Koutsikou, Z. Frontistis, I. Konstantinou, <u>G. Avgouropoulos</u>, D. Mantzavinos, P. Lianos "Photoelectrocatalytic vs. Photocatalytic Degradation of OrganicWater Born Pollutants"

Catalysts 8 (2018) 455.

Impact factor: 3.520, Times cited: 4

48. J. Papavasiliou, A. Paxinou, G. Słowik, S. Neophytides, <u>G. Avgouropoulos*</u> "Steam Reforming of Methanol over Nanostructured Pt/TiO₂ and Pt/CeO₂ Catalysts for Fuel Cell Applications"

Catalysts 8 (2018) 544.

Impact factor: 3.520, Times cited: 8

49. J. Papavasiliou, C. Schutt, G. Kolb, S. Neophytides <u>G. Avgouropoulos*</u> "Technological aspects of an auxiliary power unit with internal reforming methanol fuel cell" *Int. J. Hydrogen Energy* 44 (2019) 12818-12828.

Impact factor: 4.939, Times cited: 3

50. K. Kappis, C. Papadopoulos, J. Papavasiliou, J. Vakros, Y. Georgiou, Y. Deligiannakis, G. Avgouropoulos* "Tuning the catalytic properties of copper-promoted nanoceria via a hydrothermal method"

Catalysts 9 (2019) 138.

Impact factor: 3.520, Times cited: 9

51. I. Papagiannis, E. Doukas, A. Kalarakis, <u>G. Avgouropoulos</u>, P. Lianos "Photoelectrocatalytic H₂ and H₂O₂ Production Using Visible-Light-Absorbing Photoanodes"

Catalysts 9 (2019) 0.

Impact factor: 3.520, Times cited: 8

52. W. Gac, W. Zawadzki, M. Greluk, G. Słowik, A. Machocki, J. Papavasiliou, <u>G. Avgouropoulos*</u>, "Investigation of the Inhibiting Role of Hydrogen in the Steam Reforming of Methanol"

ChemCatChem 11 (2019) 3264-3278.

Impact factor: 4.853, Times cited: 3

53. C. Papadopoulos, K. Kappis, J. Papavasiliou, J. Vakros, M. Kuśmierz, W. Gac, Y. Georgiou, Y. Deligiannakis, <u>G. Avgouropoulos*</u> "Copper-promoted ceria catalysts for CO oxidation reaction"

Catal. Today (corrected proof) https://doi.org/10.1016/j.cattod.2019.06.078.

Impact factor: 5.825, Times cited: 4

54. P. Angelopoulou, <u>G. Avgouropoulos*</u>, "Effect of electrode loading on the electrochemical performance of LiAl0.1Mn1.9O4 cathode for lithium-ion batteries" *Mater. Res. Bull.* 119 (2019) 110562

Impact factor: 4.019, Times cited: 2

55. P. Katsoufis, V. Mylona, C. Politis, <u>G. Avgouropoulos</u>, P. Lianos, "Study of some basic operation conditions of an Al-air battery using technical grade commercial aluminum" *J. Power Sources* 450 (2020) 227624

Impact factor: 8.247, Times cited: 2

56. K. Vrettos, P. Angelopoulou, J. Papavasiliou, <u>G. Avgouropoulos*</u>, V. Georgakilas, "Sulfur-doped Graphene Aerogels reinforced with Carbon Fibers as Electrode Materials", *J. Mater. Sci.*, https://doi.org/10.1007/s10853-020-04391-2

Impact factor: 3.553, Times cited: 1

57. P. Katsoufis, E. Doukas, C. Politis, <u>G. Avgouropoulos</u>, P. Lianos, "Enhanced rate of hydrogen production by corrosion of commercial aluminum" *Int. J. Hydrogen Energy* (2020) in press, https://doi.org/10.1016/j.ijhydene.2020.01.215.
Impact factor: 4.939, Times cited: 1

58. P. Angelopoulou K. Vrettos, V. Georgakilas, <u>G. Avgouropoulos*</u>, "Graphene Aerogel Modified Carbon Paper as Anode for Lithium-Ion Batteries",

Chem. Sel. 5 (2020) 1-7.

{Impact factor: 1.811}

59. P. Katsoufis, M. Katsaiti, C. Mourelas, T.S. Andrade, V. Dracopoulos, C. Politis, G. Avgouropoulos*, P. Lianos, "Study of a thin film aluminum-air battery", *Energies* 13 (2020) 1447.

{Impact factor: 2.702}

60. M. Fitros, S.F. Tombros, S. Kokkalas, S.P. Kilias, M. Perraki, V. Skliros, X.C. Simos, K. Papaspyropoulos, <u>G. Avgouropoulos</u>, A.E. Williams-Jones, D. Zhai, K. Hatzipanagiotou, "REE-enriched skarns in collisional settings",

Lithos 370-371 (2020) 10563813.

{Impact factor: 3.390}

61. O.S. Taskin, N. Yuca, J. Papavasiliou, <u>G. Avgouropoulos</u>, "Interconnected conductive gel binder for high capacity silicon anode for Li-ion batteries",

Mater. Lett. 273 (2020) 127918.

{Impact factor: 3.204}

B. PRESENTATIONS/PUBLICATIONS IN INTERNATIONAL CONFERENCES

- G. Avgouropoulos, C. Papadopoulou, T. Ioannides, J. Batista, S. Hocevar, H. Matralis, "A comparative study of Pt/γ-Al₂O₃, Au/α-Fe₂O₃ and CuO-CeO₂ catalysts for the selective oxidation of carbon monoxide in excess hydrogen"
 3rd European Workshop on Environmental Catalysis (ENVICAT 2001), Maiori, Italy, May 2-4, 2001.
- N. Novak Tusar, <u>G. Avgouropoulos</u>, S. Neophytides, T. Ioannides, V. Kaucic, "Preparation and catalytic performance of metal-substituted, microporous aluminophosphate MeAPo-31 (Me=Co, Mn)"
 Tth European Conference on Advanced Materials and Processes (EUROMAT 2001), Rimini, Italy, June 10-14, 2001.
- A.Ristic, <u>G. Avgouropoulos</u>, T. Ioannides, V. Kaucic, "Investigation of catalytic activity of framework and extraframework cobalt and manganese in MeAPO-34 prepared from fluoride medium" 13th International Zeolite Conference, Montpellier, July 8-13, 2001.
- 4. K. Jiratova, T. Ioannides, S. Cuba, <u>G. Avgouropoulos</u>, J. Kocianova, "Influence of acid-base properties of modified alumina on VOC combustion activity of Pt/Al₂O₃ catalyst" 15th International Congress of Chemical and Process Engineering, CHISA 2002, August 25-29, 2002, Prague.
- 5. <u>G. Avgouropoulos</u>, Th. Ioannides, H. Matralis, "CuO-CeO₂ catalysts for the selective oxidation of CO: influence of the preparation method"

 EMCC-3, 3rd Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean, Thessaloniki, Greece, May 13-15, 2003.

- 6. **G. Avgouropoulos**, T. Ioannides, "CuO-CeO₂ catalysts prepared by citrate-hydrothermal method: characterization and kinetic studies in selective CO oxidation" EuropaCat-VI, Innsbruck, Austria, August 31- September 4, 2003.
- G. Avgouropoulos, T. Ioannides, "Selective CO oxidation in excess H₂ over CuO-CeO₂ catalysts prepared by citrate and combustion methods"
 13th International Congress on Catalysis (13ICC), Paris, July 11-16, 2004.
- J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Production of hydrogen via methanol reforming"
 HELECO '05. 5th International Exhibition & Conference on Environmental Technology.
 Athens, Greece, February 3-6, 2005.
- J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Production of H₂ by steam reforming of methanol over promoted copper-cerium mixed oxide catalysts"
 EuropaCat-VII, Sofia, Bulgaria, August 28 - September 1, 2005.
- T. Tabakova, V. Idakiev, J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Ceria-supported catalysts for water-gas shift and preferential CO oxidation reactions"
 EuropaCat-VII, Sofia, Bulgaria, August 28 September 1, 2005.
- 11. T. Tabakova, V. Idakiev, J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Hydrogen production by water-gas shift reaction over nanostructured CuO/doped ceria catalysts"
 7th Workshop "Nanoscience & Nanotechnology", 24-25 November 2005, Sofia, Bulgaria.
- 12. G. Avgouropoulos, J. Papavasiliou, Ch. Papadopoulou, T. Ioannides, H. Matralis, "Effect of gold loading on the physicochemical and catalytic properties of Au/α-Fe₂O₃ catalysts for the preferential CO oxidation reaction" XVII International Conference on Chemical Reactors, 15-19 May 2006, Athens-Crete, Greece.
- 13. P. Panagiotopoulou, J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, D.I. Kondarides, "Water-gas shift activity of doped Pt/CeO₂ catalysts" XVII International Conference on Chemical Reactors, 15-19 May 2006, Athens-Crete, Greece.

- 14. <u>G. Avgouropoulos</u>, J. Papavasiliou, M. Manzoli, F. Boccuzzi, V. Idakiev, T. Tabakova, "Catalytic performance of Au/doped-ceria catalysts for the water-gas shift and preferential CO oxidation reactions" Gold 2006, 3-6 September 2006, Limerick, Ireland.
- 15. **G. Avgouropoulos**, J. Papavasiliou, T. Ioannides, "CuO-CeO₂ catalysts for methanol fuel processors"
 - 4th EFCATS School on Catalysis, St. Petersburg, Russia, 20-24 September, 2006.
- 16. F. Vindigni, <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides, T. Tabakova, V. Idakiev, M. Manzoli, F. Boccuzzi, "Purification of hydrogen by preferential CO oxidation over ceria-supported catalysts"
 Fuel Cells Science & Technology 2006, Turin, Italy, 13-14 September, 2006.
- 17. T. Tabakova, V. Idakiev, J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Impact of the support on the WGS activity of combustion synthesized CuO catalysts" ICOSECS 5, Ohrid, FYROM, 10-14 September, 2006.
- G. Avgouropoulos, J. Papavasiliou, T. Tabakova, M. Manzoli, V. Idakiev, F. Boccuzzi, T. Ioannides, "High-purity hydrogen production over nanostructured Au/doped ceria catalysts"
 8th Workshop "Nanoscience & Nanotechnology", 20-22 November 2006, Sofia, Bulgaria.
- G. Avgouropoulos, J. Papavasiliou, A. Siokou, T. Ioannides, "Redox properties of copper-manganese spinel oxide catalysts"
 EuropaCat-VIII, Turku, Finland, 26-31 August, 2007.
- 20. M. Manzoli, F. Vindigni, <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides, V. Idakiev, T. Tabakova, "Au-doped ceria catalysts for the preferential CO oxidation in H₂-rich gas mixtures"
 - EuropaCat-VIII, Turku, Finland, 26-31 August, 2007.
- 21. J. Papavasiliou, <u>G. Avgouropoulos</u>, J. Papavasiliou, A. Siokou, T. Ioannides, "Hydrogen production by methanol reforming over copper-manganese spinel oxide catalysts" EuropaCat-VIII, Turku, Finland, 26-31 August, 2007.

Austria.

- 22. T. Tabakova, M. Manzoli, F. Boccuzzi, <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides, V. Idakiev, "Selective CO oxidation over nanostructured Au/Zn-CeO₂ catalyst"
 9th Workshop "Nanoscience & Nanotechnology", 28-30 November 2007, Sofia, Bulgaria.
- 23. <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides, "Hydrogen production from methanol over combustion-synthesized noble metal/ceria catalysts"
 XVIII International Conference on Chemical Reactors, September 29 October 3, 2008, Malta.
- 24. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Mechanistic aspects of steam reforming of methanol over copper-based catalysts"
 XVIII International Conference on Chemical Reactors, September 29 October 3, 2008, Malta.
- 25. F. Boccuzzi, T. Tabakova, <u>G. Avgouropoulos</u>, J. Papavasiliou, M. Manzoli, V. Idakiev, K. Tenchev, T. Ioannides, "H₂ production by PROX and WGS reactions over Au/CeO₂-Fe₂O₃ catalysts: effect of support composition" Gold 2009, 26-29 July 2009, Heidelberg, Germany.
- 26. T. Tabakova, <u>G. Avgouropoulos</u>, J. Papavasiliou, M. Manzoli, F. Boccuzzi, V. Idakiev, K. Tenchev, T. Ioannides, "Impact of the support composition on the performance of Au/CeO₂-Fe₂O₃ catalysts in PROX and WGS reactions"
 EuropaCat-IX, Salamanca, Spain, 30th August 4th September, 2009.
- 27. T. Tabakova, V. Idakiev, <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides, M. Manzoli, F. Boccuzzi, "Effect of the preparation method on low-temperature WGS activity of Cu-Mn spinel oxide catalysts"
 EuropaCat-IX, Salamanca, Spain, 30th August 4th September, 2009.
- 28. <u>G. Avgouropoulos</u>, T. Ioannides, "Kinetics of PROX reaction over CuO–CeO₂ and CuO catalysts"
 XIX International Conference on Chemical Reactors, September 5-9, 2010, Vienna,
- 29. **G. Avgouropoulos**, "Development of an Internal Reforming Methanol Fuel Cell: Concept, Challenges and Opportunities"

- XIX International Conference on Chemical Reactors, September 5-9, 2010, Vienna, Austria.
- 30. **G. Avgouropoulos**, J. Papavasiliou, T. Ioannides and S. Neophytides, "Performance of internal reforming methanol fuel cell under various methanol/water concentrations", 9th European Symposium on Electrochemical Engineering (9th ESEE), Chania, Greece, June 19-23, 2011.
- 31. <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides and S. Neophytides, "The prospects of an internal reforming methanol fuel cell", 2011 International Conference on Hydrogen Production (ICH2P-11), Thessaloniki, Greece, June 19-22, 2011.
- 32. D. Tasis, C. Mavrokefalos, K.Papagelis, <u>G. Avgouropoulos</u>, "Hybrid carbon-based nanostructures for applications in catalysis", A European Conference/Workshop on the Synthesis, Characterization and Applications of Graphene (GrapHEL), Mykonos, Greece, September 27-30, 2012.
- 33. <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides, J. Kallitsis and S. Neophytides, "Internal reforming alcohol fuel cell", 7th Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean Countries (EMCC7), Corfu, Greece, April 27th-May 1st, 2012.
- 34. **G. Avgouropoulos** and S. Neophytides, "In Situ Hydrogen Utilization in An Internal Reforming Methanol Fuel Cell", 2013 AIChE Annual Meeting, San Francisco, USA, November 3-8, 2013.
- 35. **G. Avgouropoulos**, A. Paxinou, S. Neophytides, "Electrochemical performance of a HT-PEM fuel cell with bi-functional electro/reforming anode", European Hydrogen Energy Conference 2014, (EHEC2014), Seville, Spain, March 12-14, 2014.
- 36. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Doped copper-manganese oxide catalysts for the production of hydrogen via steam reforming of methanol", European Hydrogen Energy Conference 2014, (EHEC2014), Seville, Spain, March 12-14, 2014.
- 37. **G. Avgouropoulos**, "Catalytic and technological aspects of reforming methanol to electricity inside a fuel cell", **Keynote Presentation**, 2014 AIChE Annual Meeting, Atalanta, USA, November 16-21, 2014.

- 38. J. Papavasiliou and <u>G. Avgouropoulos</u>, "Preferential oxidation of CO over Cu-Ce oxide nanostructures", 2014 AIChE Annual Meeting, Atalanta, USA, November 16-21, 2014.
- 39. A. Paxinou, J. Papavasiliou, S. Neophytides, <u>G. Avgouropoulos</u>, "Steam reforming of methanol over nanostructured Pt/TiO₂ and Pt/CeO₂ catalysts", 2014 AIChE Annual Meeting, Atalanta, USA, November 16-21, 2014.
- 40. **G. Avgouropoulos**, S. Schlicker, G. Kolb, S. Neophytides, "Design and Demonstration of an Internal Reforming Methanol Fuel Cell System for Portable Applications", 5th EUROPEAN PEFC AND H₂ FORUM 2015 (EFCF2015), Lucerne, Switzerland, 30 June-3 July, 2015.
- 41. G. Kolb, S. Schlicker, <u>G. Avgouropoulos</u>, K.-P. Schelhaas, T. Ioannides, J. Kallitsis, S. Neophytides, "Design and operation of an auxiliary power unit with high temperature PEM fuel cell and internal methanol reforming", 10th European Congress of Chemical Engineering (ECCE2015), Nice, France, 27 September-1 October, 2015.
- 42. **G. Avgouropoulos**, "Technological aspects of internal reforming methanol fuel cells for portable applications", **Invited**, EMN Dubai Meeting, Energy Materials Nanotechnology, Dubai, United Arab Emirates, April 1-4, 2016.
- 43. J. Papavasiliou, C. Kappis, G. Avgouropoulos, "Preferential oxidation of CO over Cu-Ce oxide nanostructures", 13th International Conference on Nanosciences &Nanotechnologies NN16 Porto Palace Conference Centre & Hotel, Thessaloniki, Greece, 5-8 July 2016.
- 44. J. Papavasiliou, P. Angelopoulou, S. Neophytides, <u>G. Avgouropoulos</u>, "Recent advances of internal reforming methanol fuel cells for portable applications", 13th International Conference on Nanosciences &Nanotechnologies NN16 Porto Palace Conference Centre & Hotel, Thessaloniki, Greece, 5-8 July 2016.
- 45. J. Papavasiliou, J. Vakros, <u>G. Avgouropoulos</u>, "Effect of synthesis parameters on the catalytic properties of CuO-CeO₂ catalysts", 13th International Conference on Nanosciences &Nanotechnologies NN16 Porto Palace Conference Centre & Hotel, Thessaloniki, Greece, 5-8 July 2016.

- 46. P. Angelopoulou, F. Paloukis, <u>G. Avgouropoulos</u>, "Combustion-synthesized LiMn-based spinel nanostructures as cathode materials for lithium-ion batteries", 13th International Conference on Nanosciences &Nanotechnologies NN16 Porto Palace Conference Centre & Hotel, Thessaloniki, Greece, 5-8 July 2016.
- 47. J. Papavasiliou, Y. Georgiou, E. Mouzourakis, <u>G. Avgouropoulos</u>, Y. Deligiannakis, "Au and Cu sub-nanoclusters dispersed on nanoceria for Preferential CO-Oxidation reaction", 14th International Conference on Nanosciences &Nanotechnologies NN17 Porto Palace Conference Centre & Hotel, Thessaloniki, Greece, 4-7 July 2017.
- 48. K. Kappis, J. Papavasiliou, <u>George Avgouropoulos</u>, "Tuning of nanoceria properties via a hydrothermal method" 14th International Conference on Nanosciences & Nanotechnologies NN17 Porto Palace Conference Centre & Hotel, Thessaloniki, Greece, 4-7 July 2017.
- 49. J. Papavasiliou, C. Schütt, G. Kolb, S. Neophytides, <u>G. Avgouropoulos</u>, "Technological aspects of an auxiliary power unit with internal reforming methanol fuel cell", European Hydrogen Energy Conference 2018 (EHEC2018). Costa del Sol, Spain, March 14-16, 2018.
- 50. C. Papadopoulos, K. Kappis, J. Papavasiliou, J. Vakros, Y. Georgiou, Y. Deligiannakis, A.G. Chronis, M.M. Sigalas, G. Avgouropoulos, "Atomically dispersed copper on ceria nanostructures for CO oxidation" 12th International Symposium of Heterogeneous Catalysis, Sofia, Bulgaria, 26-29 August 2018.
- 51. P. Angelopoulou, K. Vrettos, V. Georgakilas, <u>G. Avgouropoulos</u>, "Graphene aerogels as anode electrode for lithium-ion batteries", Advanced Nanomaterials 2019, ANM2019, Aveiro, Portugal, 17-19 July, 2019.
- 52. K. Vrettos, P. Angelopoulou, <u>G. Avgouropoulos</u>, V. Georgakilas, "Synthesis of Sodium Sulfide Reduced Graphene Oxide Aerogels enhanced with Surface Treated Carbon Fibers as Electrode Materials", Advanced Nanomaterials 2019, ANM2019, Aveiro, Portugal, 17-19 July, 2019.

- 53. <u>G. Avgouropoulos</u>, M. Sigalas, S. Nikoletseas, E. Tatakis, D. Vanvitsiotis, A. Sougias, "Integrated PV Surveillance, Management and Revitalization System", Advanced Nanomaterials 2019, ANM2019, Aveiro, Portugal, 17-19 July, 2019.
- 54. A. Chronis, J. Papavasiliou, <u>G. Avgouropoulos</u>, M. Sigalas, "A DFT investigation of atomically dispersed copper in ceria nanostructures", Advanced Nanomaterials 2019, ANM2019, Aveiro, Portugal, 17-19 July, 2019.

C. PRESENTATIONS/PUBLICATIONS IN NATIONAL CONFERENCES

- 1. <u>G. Avgouropoulos</u>, T. Ioannides, J. Batista, S. Hocevar, H. Matralis, "Copper catalysts for application in fuel processors",
 - 6th Panhellenic Catalysis Symposium, Delphi, Greece, November 3-4, 2000.
- G. Avgouropoulos, I. Fotopoulos, C. Papadopoulou, T. Ioannides, H. Matralis, "Selective CO oxidation over Au/α-Fe₂O₃ catalysts",
 6th Panhellenic Catalysis Symposium, Delphi, Greece, November 3-4, 2000.
- 3. **G. Avgouropoulos**, T. Ioannides, "Inhibition of hydrogen oxidation during oxidation of H₂-CO mixtures over Pt and Rh catalysts: Effect of the support"
 - 3rd Panhellenic Conference on Chemical Engineering, Athens, Greece, May 31-June 2, 2001.
- 4. **G. Avgouropoulos**, T. Ioannides, "Selective CO oxidation in the presence of excess H₂ over CuO-CeO₂ synthesized with a combustion method"
 - 7th Panhellenic Catalysis Symposium, Edessa, Greece, October 3-4, 2002.
- 5. **G. Avgouropoulos**, J. Papavasiliou, T. Ioannides, C. Papadopoulou, H. Matralis, "Effect of metal loading on the physicochemical properties of Au/α-Fe₂O₃ catalysts for the selective oxidation of CO in the presence of excess H₂"
 - 4th Panhellenic Conference on Chemical Engineering, Patras, Greece, May 29-31, 2003.
- 6. <u>G. Avgouropoulos</u>, J. Papavasiliou, T. Ioannides, "Application of CuO-CeO₂ catalysts in methanol processors for hydrogen production"
 - 1st National Conference of Hydrogen Technologies, Athens, Greece, September 30 October 2, 2004.

- J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Production of hydrogen via combined steam reforming of methanol over CuO-CeO₂ catalysts"
 8th Panhellenic Catalysis Symposium, Agia Nappa, Cyprus, October 30 November 1, 2004.
- 8. <u>G. Avgouropoulos</u>, T. Ioannides, "Selective CO oxidation in excess H₂ over CuO-CeO₂ catalysts prepared by citrate and combustion methods"
 8th Panhellenic Catalysis Symposium, Agia Nappa, Cyprus, October 30 November 1, 2004.
- E. Oikonomoloulos, D. Kanistras, <u>G. Avgouropoulos</u>, T. Ioannides, "Ethanol oxidation over Pt/Al₂O₃ catalysts modified with alkali"
 8th Panhellenic Catalysis Symposium, Agia Nappa, Cyprus, October 30 November 1, 2004.
- 10. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Characterization and catalytic performance of promoted CuO-CeO₂ catalysts for the steam reforming of methanol", 5th Panhellenic Conference on Chemical Engineering, Thessaloniki, Greece, May 26-28, 2005.
- 11. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Hydrogen production via combined steam reforming of methanol over Cu-Mn catalysts"
 2nd National Conference of Hydrogen Technologies, Thessaloniki, Greece, October 20-21, 2005.
- J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Development of Cu-Mn catalysts for methanol reformers"
 9th Panhellenic Catalysis Symposium, Leykada, Greece, 6-7 October, 2006.
- 13. **G. Avgouropoulos**, J. Papavasiliou, V. Idakiev, T. Tabakova, T. Ioannides, "Selective oxidation of CO in the presence of excess H₂ over doped Au/CeO₂ catalysts" 9th Panhellenic Catalysis Symposium, Leykada, Greece, 6-7 October, 2006.
- 14. M. Konsolakis, M. Vrontaki, <u>G. Avgouropoulos</u>, T. Ioannides, I. Yentakakis, "Novel doubly-promoted catalysts for the lean NO_x reduction by H₂ + CO: Pd(K)/Al₂O₃- (TiO₂)" 9th Panhellenic Catalysis Symposium, Leykada, Greece, 6-7 October, 2006.
- 15. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Redox properties of Cu-Mn catalysts for the production of hydrogen from methanol"

- 6th Panhellenic Conference on Chemical Engineering, Athens, Greece, May 31-June 2, 2007.
- 16. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Development of a pilot plant for the production of hydrogen by methanol reforming for the production of energy in a fuel cell" 3nd National Conference of Hydrogen Technologies, Patras, Greece, November 19-20, 2007.
- 17. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "A mechanistic study of steam reforming of methanol over copper catalysts"
 10th Panhellenic Catalysis Symposium, Metsovo, Greece, 3-4 October, 2008.
- 18. **G. Avgouropoulos**, J. Papavasiliou, M. Geormezi, J.K. Kallitsis, T. Ioannides, S. Neophytides, "Development of an innovative fuel cell with internal methanol reforming" 7th Panhellenic Conference on Chemical Engineering, Patras, Greece, 3-5 June, 2009.
- G. Avgouropoulos, J. Papavasiliou, T. Ioannides, "Hydrogen production from methanol over Me/CeO₂ (Me: Pt, Rh, Pd) catalysts"
 7th Panhellenic Conference on Chemical Engineering, Patras, Greece, 3-5 June, 2009.
- 20. G. Avgouropoulos, J. Papavasiliou, J.K. Kallitsis, T. Ioannides, S. Neophytides, "Technological challenges and opportunities of an innovative fuel cell with internal reforming of methanol"
 11th Panhellenic Catalysis Symposium, Athens, 22-23 October, 2010.
- 21. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "CuMnO_x catalysts for HT-PEM fuel cells with internal reforming of methanol: Effect of phosphoric acid" 11th Panhellenic Catalysis Symposium, Athens, 22-23 October, 2010.
- 22. J. Papavasiliou, <u>G. Avgouropoulos</u>, T. Ioannides, "Steam reforming of methanol over CuMn mixed oxide catalysts: effect of third metal addition" 8th Panhellenic Conference on Chemical Engineering, Thessaloniki, Greece, May 26-28, 2011.
- 23. G. Avgouropoulos, S. Lampos, T. Skaltsas, D. Tasis, "Carbon nanotubes based catalytic supports"
 8th Panhellenic Conference on Chemical Engineering, Thessaloniki, Greece, May 26-28, 2011.

- 24. C. Mavrokefalos, D. Tasis, <u>G. Avgouropoulos</u>, "Deposition of precious metals on carbon nanostructures: Catalytic applications"
 12th Panhellenic Catalysis Symposium, Chania, Greece, 25-27 October, 2012.
- 25. **G. Avgouropoulos**, K. Papadimitriou, J. Papavasiliou, T. Ioannides, J. Kallitsis, S. Neophytides, "Advanced materials for fuel cells with internal reforming of methanol" 12th Panhellenic Catalysis Symposium, Chania, Greece, 25-27 October, 2012.
- 26. P.A. Kolozoff, S. Katsiaounis, <u>G. Avgouropoulos</u>, E. Topoglidis, "Adsorption and Electrochemical Behaviour of Cyt-c on Carbon Nanotubes/TiO₂ Nanocomposite Films Fabricated at Various Annealing Temperatures", 30th Panhellenic Conference on Solid-State Physics and Materials Science, Heraklion, Crete, Greece, 21-24 September, 2014.
- 27. P. Angelopoulou and <u>G. Avgouropoulos</u>, "Combustion synthesis of Li-Mn spinel nanostructures as cathode materials for lithium-ion batteries", 30th Panhellenic Conference on Solid-State Physics and Materials Science, Heraklion, Crete, Greece, 21-24 September, 2014.
- 28. A. Paxinou, J. Papavasiliou, <u>G. Avgouropoulos</u>, "Pt/TiO₂ and Pt/CeO₂ nanostructured materials for fuel cell applications", **Best Poster Award**, 30th Panhellenic Conference on Solid-State Physics and Materials Science, Heraklion, Crete, Greece, 21-24 September, 2014.
- 29. J. Papavasiliou and <u>G. Avgouropoulos</u>, "Effect of hydrothermal conditions on the physicochemical properties of Cu-Ce oxide nanostructures", 30th Panhellenic Conference on Solid-State Physics and Materials Science, Heraklion, Crete, Greece, 21-24 September, 2014.
- 30. A. Paxinou, J. Papavasiliou, S. Neophytides, <u>G. Avgouropoulos</u>, "Steam reforming of methanol over nanostructured Pt/TiO₂ and Pt/CeO₂ catalysts", 13th Panhellenic Catalysis Symposium, Palaios Agios Athanasios Pellas, Greece, 16-18 October, 2014.
- 31. J. Papavasiliou and <u>G. Avgouropoulos</u>, "Selective oxidation of CO over oxide nanostructures of Cu-Ce", 13th Panhellenic Catalysis Symposium, Palaios Agios Athanasios Pellas, Greece, 16-18 October, 2014.

- 32. J. Papavasiliou, J. Vakros, <u>G. Avgouropoulos</u>, "Effect of synthesis parameters on the catalytic properties of mixed oxides of copper-cerium", 13th Panhellenic Catalysis Symposium, Palaios Agios Athanasios Pellas, Greece, 16-18 October, 2014.
- 33. A. Paxinou, J. Papavasiliou, F. Paloukis, <u>G. Avgouropoulos</u>, S. Neophytides, "Production and utilization of hydrogen in an internal reforming methanol fuel cell", 13th Panhellenic Catalysis Symposium, Palaios Agios Athanasios Pellas, Greece, 16-18 October, 2014.
- 34. P. Angelopoulou, F. Paloukis, G. Gouzia, <u>G. Avgouropoulos</u>, "Study of Li-Mn spinel nanostructures for application in Li-ion batteries", 10th Panhellenic Conference on Chemical Engineering, Patras, Greece, 4-6 June, 2015.
- 35. P. Angelopoulou, F. Paloukis, G. Gouzia, <u>G. Avgouropoulos</u>, "Study of Li-Mn spinel nanostructures for application in Li-ion batteries", 10th Panhellenic Conference on Chemical Engineering, Patras, Greece, 4-6 June, 2015.
- 36. A. Paxinou, J. Papavasiliou, S. Neophytides, <u>G. Avgouropoulos</u>, "Development of nanostructured Pt/CeO₂ and Pt/TiO₂ catalysts for the production of hydrogen from methanol", 10th Panhellenic Conference on Chemical Engineering, Patras, Greece, 4-6 June, 2015.
- 37. J. Papavasiliou, W. Gac, A. Machocki, <u>G. Avgouropoulos</u>, "Kinetic studies of steam reforming of methanol over copper and palladium catalysts", 14th Panhellenic Catalysis Symposium, Patras, Greece, 13-15 October, 2016.
- 38. J. Papavasiliou, J. Vakros, <u>G. Avgouropoulos</u>, "Modification of physicochemical properties of CuO/CeO₂ via re-dispersion of active phase", 14th Panhellenic Catalysis Symposium, Patras, Greece, 13-15 October, 2016.
- 39. C. Papadopoulos, K. Kappis, J. Papavasiliou, J. Vakros, Y. Georgiou, Y. Deligiannakis, G. Avgouropoulos, "Promotion of the catalytic properties of nanoceria with atomically dispersed copper via a hydrothermal method", 15th Panhellenic Catalysis Symposium, Ioannina, Greece, October 18-20, 2018.
- 40. P. Angelopoulou, <u>G. Avgouropoulos</u>, "Effect of substrate and loading on the electrochemical behavior of LiAl_{0.1}Mn_{1.9}O₄ cathodic electrode", 12th Panhellenic Conference on Chemical Engineering, Athens, Greece, 29-31 May, 2019.

41. P. Angelopoulou, S. Kassavetis, P. Patsalas, <u>G. Avgouropoulos</u>, "Enhanced electrochemical performance of Li-ion battery via TiN coating of LiAl0.1Mn1.9O4 cathode electrode", 34th Panhellenic Conference on Solid-State Physics and Materials Science, Patras, Greece, 11-14 September, 2019.

D. PATENTS

1. S. Hočevar, J. Batista, H. Matralis, T. Ioannides, G. Avgouropoulos,

"A Process for Catalytic, Selective Oxidation of Carbon Monoxide in the Mixtures of Gases Containing Excess Hydrogen, a Catalyst and a Process for its Preparation"

WO 01/60738 A2 (Pub. Date: 23 August 2001)

US 2004/0156770 A1 (Pub. Date: 12 August 2004)

Filing date: 9 February 2001.

G. Avgouropoulos, J. Papavasiliou, M. Daletou, M. Geormezi, N. Triantafyllopoulos, T. Ioannides, J. Kallitsis, S. Neophytides,

"Internal Reforming Alcohol High Temperature PEM Fuel Cell"

United States Patent Application No: 61/095,779 (10 Sep. 2008)

E. BOOKS and CHAPTERS

- 1. <u>George Avgouropoulos</u> and Tatyana Tabakova, "Environmental Catalysis over Goldbased Materials", Royal Society of Chemistry, 2013.
- George Avgouropoulos, "Preferential oxidation of carbon monoxide over gold catalysts" in "Environmental Catalysis over Gold-based Materials" edited by G. Avgouropoulos and T. Tabakova, Royal Society of Chemistry, 2013.

F. THESIS

- 1. <u>George Avgouropoulos</u>, "In vitro calcification of bioprosthetic heart valves", **Diploma**Thesis, Department of Chemical Engineering, University of Patras, Greece, 1997.
- George Avgouropoulos, "Copper-based catalysts for fuel processors", M.Sc. Thesis,
 Department of Chemical Engineering, University of Patras, Greece, 2000.

3. <u>George Avgouropoulos</u>, "Development of a catalytic process for the selective catalytic oxidation of CO in the presence of excess hydrogen", Ph.D. Thesis, Department of Chemical Engineering, University of Patras, Greece, 2003.