# Dr. Panagiota Pimenidou

# University Lecturer – Qualified Chemical Engineer – Research and Development

An ambitious, diligent and results-orientated **University Lecturer** and highly qualified **Chemical Engineer** combining excellent engineering, research and planning skills, acquired during academic studies, lecturing and industry-based laboratory and supervision experience. An expert in heterogeneous catalysis for hydrogen production, catalytic combustion, emissions reduction. A confident, disciplined and dedicated tutor / lecturer, able to demonstrate a practical and analytical approach to resolving challenging problems and issues, even while under significant pressure. An academically talented individual who is able to understand, interpret and clearly articulate specialist, complex information to a variety of audiences. Proactive and versatile, this dynamic team player is keen to develop and seeks to make a major contribution

#### Skills

# Selected Achievements

- ✓ Successfully planned experiments, analysed, recorded, interpreted and published research on waste biomass fuels, for hydrogen-rich syngas & high purity hydrogen production with in-situ CO<sub>2</sub>
- ✓ Carried out independent research to formulate biodiesel engine mechanisms alternative to combustion, immobilisation of nanocatalyst for reduction of pollutants by AOPs (Advanced Oxidation Processes)
- ✓ Researched and carried out supervision on materials for gas- solid reaction solar heat storage systems
- ✓ Undertook performance and emission studies for DST-UKIERI Thematic Partnerships (British Council) on biofuel, blended with high oxygen storage capacity nanoparticles, using an indirect injection engine
- ✓ Provided advice, guidance and management for the production of wastewater, focusing on quality of the end product and minimisation of total production line costs

Education		
PhD – Novel Process of Hydrogen Production from Liquids of Waste Bio-mass Origin	University of Leeds	2007 to 2010
PgCHEP – FHEA (Fellow of the Higher Education Academy)	University of Ulster	2011 to 2013
MEng – Chemical Engineering	University of Leeds	1995 to 1999
Career History		

# January 2017 to today

The University of Bradford Lecturer in Chemical Engineering

Lecturer in Chemical Engineering, School of Engineering & Informatics. Programme leader of the BEng/MEng in Chemical Engineering. Module co-ordinator in undergraduate and postgraduate studies. Ensuring academic quality in teaching and learning. Additionally responsible for carrying out comprehensive research as appropriate (biodiesel production by innovative nanocatalysis, advanced oxidation processes).

# March 2010 to December 2016University of UlsterLecturer in Hydrogen Safety

Playing a key role as a Lecturer on interdisciplinary courses for undergraduate and postgraduate students, within the CST (Centre for Sustainable Technologies), School of the Built Environment. Responsible for providing academic advice and guidance, as well as a range of administrative tasks including assessing and validating / revalidating new and existing courses to ensure consistent standards and delivery and preparing / submitting exam documents to the

exam course committees. Additionally responsible for carrying out comprehensive research as appropriate (emissions reduction, catalytic combustion).

# **Key Projects / Achievements**

- Made a major contribution to the energy team's research on 'phase change materials for solar heat storage', by adding a primary focus on 'reactive / absorption solid gas systems'
- Catalytic combustion mechanisms for the minimisation of controlled emissions from diesel engine using dieselbiodiesel/diesel blends
- Researched, developed and coordinated 5 course modules and effectively supervised and delivered the modules to students
- Acted as principal investigator for studies on performance & emissions

# January 2007 to January 2010 University of Leeds PhD Student (Post-graduate Demonstrator)

Working as a demonstrator on the under-graduate 'process engineering systems' module and on the post-graduate 'renewable sources of energy' module, while undertaking PhD studies and supervising laboratory sessions. Responsibilities included planning experiments and analysing, recording and interpreting results. Successfully published original research articles in peer reviewed international research journals and delivered presentations at international conferences. Additionally contributed as chief invigilator, invigilator and sub-office exams officer, enforcing exam codes of practice and maintaining high standards

# **Key Projects / Achievements**

- Worked on a project to develop a novel process of hydrogen production, resulting in the publication of 4 research articles in international peer reviewed journals, as well as delivery of research presentations at 3 international conferences
- Gained comprehensive, detailed understanding of materials characterisation for TGA / TGA-FTIR, SEM, EDX, DSC, TEM, GCMS, GC-FID, XRD, UV-vis
- Upstream processing and refinery operations study using ASPEN Hysys, ASPEN Plus, gPROMS.

# Publications

# 2019

Pimenidou P.; Shanmugapriya N.; Shah N. Performance and emissions study of diesel and waste biodiesel blends with nanosized CZA2 of high oxygen storage capacity *Fuel* 2019, *239*, 1072-1082

# 2015

Pimenidou P.; Dupont V. Dolomite study for in- situ CO<sub>2</sub> capture for chemical looping reforming. *Int J Ambient Energy* 2015, *36*, 4, 170–182

# 2012

Pimenidou P.; Dupont V. Characterisation of palm empty fruit bunch (PEFB) and pinewood bio-oils and kinetics of their thermal degradation. *Bioresource Technol.* 2012, *109*, 198- 205. Special Issue: Innovative Researches on Algal Biomass

# 2010

Pimenidou P.; Rickett G.; Dupont V.; Twigg M. V. Chemical looping reforming of waste cooking oil in packed bed reactor. *Bioresource Technol.* 2010, *101*, 16, 6389- 6397.

# 2010

Pimenidou P.; Rickett G.; Dupont V.; Twigg M. V. High purity H<sub>2</sub> by sorption-enhanced chemical looping reforming of waste cooking oil in a packed bed reactor. *Bioresource Technol.* 2010, *101*, 23, 9279-9286.

**Current Affiliations** 

Associate Member

FHEA (Higher Education Academy)

IChemE (AIChemE)

Referees

Fellow Member