



The  
**Petroleum Institute**  
Abu Dhabi

Scholarly Publications  
2010





# **The Petroleum Institute**

Scholarly Publications  
2010

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# Introduction

The Petroleum Institute (PI) is a teaching and research university with a strong commitment to research excellence in engineering and applied sciences related to the oil and energy industries. PI faculty are internationally recognized for their accomplishments in basic and applied research and in technology development. In 2010, the research output of faculty, staff and graduate students continued the growth of previous years with an increasing number of publications in leading international peer-reviewed journals, books, book chapters and conference proceedings.

This document provides details of the scholarly publications of faculty, staff and graduate students in the College of Engineering, College of Arts and Sciences, Advanced University Placement Program, Women in Science and Engineering Program and the Library. It provides an essential guide to the PI's research activities for our industrial sponsors and the UAE Ministry of Higher Education and Scientific Research, as well as prospective faculty and students. It is also an invaluable resource for the international academic and research community, indicating potential research collaboration opportunities with PI faculty. We always welcome collaboration in exciting new research projects.

I would like to congratulate the entire PI community for one more year of great research achievements.

*Dr. Ismail A. Tag  
Senior Vice President and Provost  
The Petroleum Institute  
Abu Dhabi  
United Arab Emirates*

*February 2011*

# COLLEGE OF ENGINEERING

## Books

### Chemical Engineering Department

Y. Kahil, D. Laurence and A. S. **Berrouk**, *Depot d'Aerosols dans une Conduite Coudée A 90°: Suivi de Particules dans un Ecoulement Turbulent avec Approche Lagrangienne*, Saarbrucken, Germany, Editions Universitaires Européennes, 2010.

### Electrical Engineering Department

H. M. Hasanién, S. M. **Muyeen** and J. Tamura, *Switched Reluctance Machine*, Napoli, Italy, Praise Worthy Praise, 2010.

### Mechanical Engineering Department

L. **Khezzar** and A. Haddad, *Mécanique des Milieux Continus – Une Introduction. Cours et exercices corrigés*, Algiers, Algeria, Office Des Publication Universitaires, 2010.

### Petroleum Geosciences Department

J. S. **Gomes** and F. B. Alves, *O Universo da Indústria Petrolífera, 2<sup>nd</sup> Edition*, Lisbon, Portugal, Calouste Gulbenkian Foundation, 2010.

## Edited collections: Books

### Chemical Engineering Department

V. **Mittal**, (Ed.), *Advances in Polymer Nanocomposites Technology*, New York, USA, Nova Science Publishers, 2010.

V. **Mittal**, (Ed.), *Optimization of Polymer Nanocomposite Properties*, Weinheim, Germany, Wiley VCH, 2010.

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V. **Mittal**, (Ed.), *Advanced Polymer Nanoparticles: Synthesis and Surface Modification*, Boca Raton, USA, Taylor and Francis, 2010.

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V. **Mittal**, (Ed.), *Polymer Nanotube Nanocomposites: Synthesis, Properties and Applications*, Salem, USA, Scrivener Publishing and John Wiley, 2010.

V. **Mittal**, (Ed.), *Miniemulsion Polymerization Technology*, Salem, USA, Scrivener Publishing and John Wiley, 2010.

V. **Mittal**, (Ed.), *Polymer Nanocomposites by Emulsion and Suspension Polymerization*, Cambridge, UK, Royal Society of Chemistry, 2010.

A. R. H. Goodwin, J. V. Sengers and C. J. **Peters**, (Eds.), *Applied Thermodynamics of Fluids*, Cambridge, UK, The Royal Society of Chemistry, 2010.

## Electrical Engineering Department

S. M. **Muyeen**, (Ed.), *Wind Power*, Vukovar, Croatia, InTech, 2010.

## Mechanical Engineering Department

L. J. Ernst, G. Q. Zhang, W. D. van Driel, P. **Rodgers**, C. Bailey and O. de Saint Leger, (Eds), *Proceedings of EuroSimE 2010 – Eleventh International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Micro-Electronics and Micro-Systems*, Bordeaux, France, Institute of Electrical and Electronics Engineers, 2010.

R. J. **Simmons**, (Ed.), *Proceedings of the 28<sup>th</sup> International System Safety Conference*, Unionville, VA, United States, System Safety Society, 2010.

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### Chemical Engineering Department

V. **Mittal**, (Ed.), *Polymers*, Basel, Switzerland, MDPI, Special Issue, 2010.

C. McCabe and C. **Peters**, (Eds.), *Fluid Phase Equilibria*, The Netherlands, Elsevier, vol. 294, no.1 - 2, pp. 1-246, 2010.

S. Raeissi, M. C. Kroon and C. J. **Peters**, (Eds.), *The Journal of Supercritical Fluids*, The Netherlands, Elsevier, vol. 55, no.2, pp. 401-860, 2010.

### Mechanical Engineering Department

C. A. Ericson and R. J. **Simmons**, (Eds.), *Journal of System Safety*, Unionville, VA, United States, System Safety Society, vol. 46, no. 5, 2010.

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I. G. **Economou**, "Cubic and generalized van der Waals equations of state", in *Applied Thermodynamics of Fluids*, A. R. H. Goodwin, J. V. Sengers and C. J. Peters (Eds.), 2010, pp. 53 – 83.

V. **Mittal**, "Advances in surface functionalization of carbon nanotubes", in *Advances in Nanotechnology*, Z. Bartul and J. Trenor, (Ed.), New York, USA, Nova Science Publishers, 2010, pp. 1-24.

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V. **Mittal**, "Polymer nanocomposites technology: An overview", in *Advances in Polymer Nanocomposites Technology*, V. Mittal, (Ed.), New York, USA, Nova Science Publishers, 2010, pp. 1-30.

V. **Mittal**, "Prediction of nanocomposite properties", in *Advances in Polymer Nanocomposites Technology*, V. Mittal, (Ed.), New York, USA, Nova Science Publishers, 2010, pp. 325-350.

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V. **Mittal**, "Barrier resistance generation in polymer nanocomposites", in *Optimization of Polymer Nanocomposite Properties*, V. Mittal, (Ed.), Weinheim, Germany, Wiley VCH, 2010, pp. 173-193.

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F. M. **Vargas**, "Modeling of asphaltene precipitation and arterial deposition", Ph.D. thesis, Department of Chemical and Biomolecular Engineering, Rice University, Houston, USA, 2010.

## Electrical Engineering Department

A. **Al-Durra**, "Model-based estimation for in-cylinder pressure of advanced combustion engines", Ph.D. thesis, Department of Electrical and Computer Engineering, Ohio State University, Columbus, Ohio, USA, 2010.

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\*\*\*M. ElKadi, A. Pillay, S. C. Fok, F. Feghali, G. **Bassioni** and S. Stephen, "Depth profiling (ICP-MS) study of toxic metal buildup in concrete matrices: Potential environmental impact", *Sustainability*, vol. 2, no. 10, pp. 3258-3269, 2010.

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E. Androulaki, S. Lambropoulou, I. G. **Economou** and J. H. Przytycki, "Inductive construction of 2-connected graphs for calculating the virial coefficients", *J. Phys. A: Math. Theor.*, vol. 43, no. 31, pp. 315004, 1-20, 2010.

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V. **Mittal**, "Synthesis of environmentally responsive polymers by atom transfer radical polymerization: Generation of reversible hydrophilic and hydrophobic surfaces", *Polymers*, vol. 2, no. 2, pp. 40-56, 2010.

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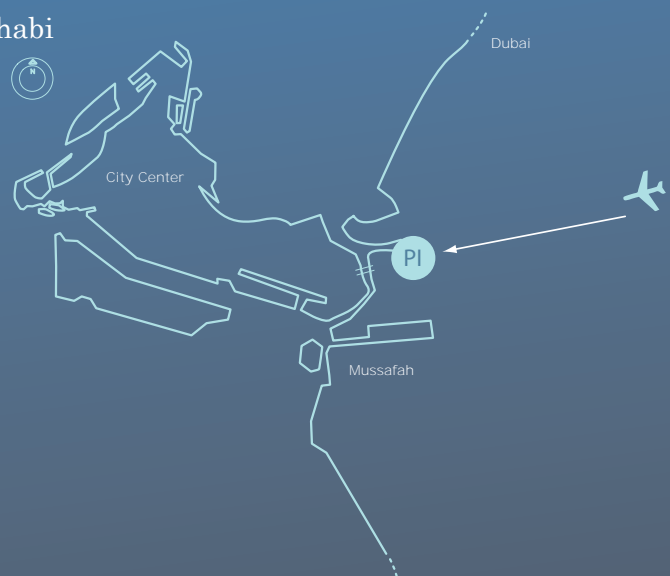
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