

RESUME

Hee Moon

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Date of Birth July 7, 1955
Nationality Korean
Height 172 cm
Weight 70 kg

Educational Background

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|-------|----------------------|--|
| Ph.D. | Chemical Engineering | Korea Advanced Institute of Science and Technology (KAIST), Korea, (1980.3-1984.8) |
| M.S. | Chemical Engineering | KAIST, Korea, (1976.3-1978.2) |
| B.S. | Chemical Engineering | Chonnam National University, Korea, (1972.3-1976.2) |

Academic Positions

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|------------------|--|
| 5/1993 - Present | Professor, School of Chemical Engineering, CNU |
| 9/2009 - 8/2011 | Chairman of the Board of University Councilors, CNU President of Faculty Union, CNU |
| 9/2002 - 8/2004 | Dean, College of Engineering, CNU Dean, Graduate School of Industry, CNU |
| 1/1997 - 6/1999 | Head, School of Chemical Engineering, CNU |
| 7/1996 - 12/1996 | Visiting Professor (ARC Fellowship), UTS, Australia |
| 2/1993 - 2/1995 | Chairman, Department of Chemical Technology, CNU |
| 7/1991 - 8/1992 | Associate Dean of Student Affairs of CNU |
| 2/1990 - 2/1992 | Chairman, Department of Chemical Technology, CNU |
| 4/1987 - 4/1993 | Associate Professor, Chonnam National University (CNU) |
| 7/1985 - 8/1987 | Research Associate, Syracuse University, U.S.A. |
| 5/1979 - 4/1985 | Lecturer and Assistant Professor, Chonnam National University |

Awards and Fellowships

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|-----------|---|---|
| 4/2008 | Presidential Award | Korean President |
| 12/2006 | Award of the best researcher | Engineering College, CNU |
| 10/2005 | Meritorious Award for Korean Journal of Chemical Engineering | The Korean Institute of Chemical Engineers |
| 7-12/1996 | ARC Fellowship | Australian Research Council |

Professional Activities

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|------------------|-----------------|--|
| 1/2011 – 12/2011 | Vice-President | The Korean Institute of Chemical Engineers |
| 1/2010 – 12/2011 | Vice-President | The Korean Society of Industrial and Engineering Chemistry |
| 1/2008 – 12/2009 | Chairman | Division of Separation Technologies, The Korean Institute of Chemical Engineers |
| 1/2006 – 12/2009 | Editor-in Chief | Journal of The Korean Industrial and Engineering Chemistry (ACE) |
| 1/1995 – 12/2010 | Editorial Board | Adsorption Science and Technology |
| 1/1995 – Present | Member | International Adsorption Society |
| 1/1978 – Present | Member | The Korean Institute of Chemical Engineers |
| 1/1990 – Present | Member | The Korean Society of Industrial and Engineering Chemistry |
| 11/2003 – 8/2004 | Chairman | Engineering Dean's Association of Korean National Universities |

Active Research Areas

Gas Phase Adsorption

1. Adsorption equilibrium, kinetics and dynamics: (VOC and water)
2. Removal of air pollutants (on activated carbon, ACF, zeolite etc)
3. Synthesis and application of meso-porous separation media (MCM)
4. Synthesis of spherical nano particles as artificial dusts
5. Methane (natural gas) and hydrogen storage
6. Electric double layer capacitors (EDLC)
7. Adsorption sensors based on quartz crystal microbalance (QCM)

Liquid Phase Adsorption

1. Wastewater treatment: (VOC, Heavy metals, Characterization)
2. Adsorption – membrane hybrid system, Bio filtration system
3. Photo-catalytic reactions for wastewater treatment
4. Adsorption and separation of proteins/antibiotics on various media
5. Synthesis and application of chitosan and polymeric separation media

Research Projects (since 2001)

- Recovery of phosphate using modified mesoporous silica materials, KRF, 2017 – 2020 (**H. Moon**)
- New nano-porous materials for natural gas storage application - Indo-Korea Joint Program of Cooperation, KRF, 2013-2016 (**H. Moon** and M. Balathanigaimani)
- Adsorption of nitrate using nanostructured porous silica, KRF, 2013-2016 (**H. Moon**)
- Preparation of polymeric solid particles for the evaluation of air filters (Substitution of DOP/Localization), KRF, 2010-2013 (**H. Moon**)
- Adsorption-based super sensitive array sensors for multiple-species systems, KRF, 2009-2012 (**H. Moon** and C.K. Hong)
- Preparation and Surface Modification of Porous Nano-structured Carbon Electrode for High Capacity EDLC, KRF, 2009 (**H. Moon**)
- Synthesis and Application of Nano-Structured Carbon Materials for Natural Gas Storage, KOSEF, 2006-2008 (**H. Moon**, S.H. Seo and J.W. Lee)
- Reforming of CNU Engineering Education System, KRF, 2003-2005 (**H. Moon**)
- Heterogeneous Adsorption Equilibrium and Kinetic Characteristics of Volatile Organic Compounds (VOC) and Water Vapor in Mesoporous Media, KOSEF, 2001-2004 (**H. Moon**, S.H. Seo and J.W. Lee)
- Down flow Hanging Sponge Aerobic Bioreactor and Membrane-Adsorption Hybrid System: A Novel Two Stage System in Wastewater Reuse, ARC-Discovery Grant, 2002-2003 (S. Vigneswaran, H. H. Ngo, H. Harada, **H. Moon**, and R. Ben Aim)
- A filtration - Adsorption Hybrid System in Tertiary Wastewater Treatment, UTS Incentive Grant, 2002 (S. Vigneswaran, H. H. Ngo and H. Moon)
- Development of Compact Membrane Hybrid Membrane Systems Using a Physicochemical Processes and Membrane Filtration, KOSEF, 2000-2002 (**H. Moon** and S. Vigneswaran)
- A Study of Hybrid Systems Using Catalytic Combustion and Adsorption Processes (BK21), KRF, 1999-2002 (**H. Moon**, G. Seo, C.B. Chung, J.H. Kim)

Publications and patents

More than 180 technical papers and patents