In Memoriam: Kenneth Neil Marsh

Eric F. May

24th IUPAC International Conference on Chemical Thermodynamics, Guilin, China
24th August 2016
Kenneth Neil Marsh - Biography

Born Melbourne Australia, December 27th 1939

B.Sc.(Hons) Chemistry, University of Melbourne, Vic 1960
M.Sc – Physical Chemistry, University of New England
Armidale NSW, 1964 (Prof. Robin Stokes)
Ph.D. – Physical Chemistry, University of New England (UNE) Armidale NSW, 1968 (Prof. Robin Stokes)

Lecturer in Chemistry 1966-69, UNE, Australia
Nuffield Fellow 1969-1970, University of Exeter (Prof Max McGlashan) & Imperial College (Prof. J.S. Rowlinson), UK

Senior Lecturer in Chemistry 1970-73, UNE, Australia
Associate Professor in Chemistry 1974-85 and
Acting Head of Department 1975-76, UNE, Australia
Associate Director (1983-85) & Director (1985-97) of the Thermodynamics Research Centre (TRC); Prof. in Chemistry & Chem. Eng. Texas A&M USA

Prof. Chemical Engineering 1997-2006, University of Canterbury, New Zealand
Adjunct Professor 2007-2016, University of Western Australia, Australia
Kenneth Neil Marsh – World Citizen

Enjoyed travelling & working around the globe, e.g.:

Guest Researcher, Thermochemical Centre, *University of Lund*, Sweden with Prof. S. Sumner 1976

Visiting Position, Department of Chemical Engineering, *University of Canterbury*, New Zealand, 1980

Senior Gledden Fellow, *University of Western Australia*, 2003 with Prof Terry Edwards and 2008 with Prof Eric May (& Prof Glenn Hefter at *Murdoch University*).

Visiting Professor, *Colorado School of Mines* USA 2004 with Prof E. Dendy Sloan

Possibly best known around the world as Editor-in-Chief of the *Journal of Chemical & Engineering Data* from 1991-2010.
Kenneth Neil Marsh - Legacy

Ken’s legacy is immense. Attempts to summarise are bound to be inadequate. With that said, in my opinion:

1. Development and application of improved experimental apparatus & methods for measuring thermophysical properties inc. VLE, \( \rho, V^E, H^E, \Delta H, C_p, \varepsilon_r, n, D, \mu, \lambda, \ldots \)

2. Development of procedures for systematically collecting, evaluating and storing property data in searchable databases.

3. Scientific leadership through his roles as Journal Editor, Chairman & member of IUPAC Commissions, as Chairman of the CODATA Task Group, & as author and editor of reference texts, book chapters and review articles.

4. Education and guidance of countless undergraduates, many PhD students, and numerous researchers & colleagues.
Kenneth Neil Marsh – Publications

As of July 2016: 12 books, 20 book chapters, and 224 journal articles. Some of the most important (as selected by Ken) …

Marsh, K.N., Boxall, J.A., Lichenthaler, R.
Room temperature ionic liquids and their mixtures-a review. *Fluid Phase Equilib.* 2004, 219, 93-98. (450 citations)

Pinkert, A; Marsh, K. N.; Pang, S.; Staiger, M. P.
Ionic Liquids and Their Interaction with Cellulose, *Chem. Rev.* 2009, 100, 6712-6728. (298 citations)

Marsh, K.N., Deev, A., A.C-T. Wu, Tran, E. & Klamt, A.

Kenneth Neil Marsh – Publications

Development of Experimental Techniques


Kandil, M.; **Marsh, K. N.**; Goodwin, A. R. H. A Vibrating Wire Viscometer with Wire Diameters of (0.05 and 0.15) mm: Results for Methylbenzene and two Fluids with Nominal Viscosities at $T = 298$ K and $p = 0.01$ MPa of (14 and 240) mPa·s at Temperatures between (298 and 373) K and Pressures below 40 MPa. *J. Chem. Eng. Data* 2005, 50, 647-655.

Theoretical, database development and compilations/review


Kenneth Neil Marsh - Awards

Ken’s contributions have been honoured widely and throughout his career by both the scientific community and industry.

*Nuffield Dominion Traveling Fellowship* for advanced study in United Kingdom, 1969-1970

*Rennie Memorial Medalist*. Royal Australian Chemical Institute for the most significant contribution to research by an Australian chemist under 32, 1972.

*Honorary Medal by the Institute of Physical Chemistry*, for significant contribution to the advancement of Physical Chemistry at the Polish Academy of Science, 1996.

*Donald Katz Award*, Gas Processors Association, 2007

*Rossini Lecturer 2016*. The highest award in the field of Chemical Thermodynamics.
From Pure Substances & Mixtures by T. Spurling & D. Symington, (1973)

“Marsh’s technical contributions…are remarkably diverse. His work is extensive, highly cited, written clearly and always includes data & uncertainties in a form that others can use.”

Dr Michael Moldover, NIST Fellow

“Ken has been part of the evolution of the subject. He has worked across national boundaries and scientific disciplines with his familiar enormous energy to engender enthusiasm and commitment in all he has encountered…The essential qualities which Ken brought to this endeavour have been scientific credibility…as well as drive and leadership by both example and foresight.”

Professor Sir William Wakeham, Royal Academy of Engineering
A letter from his daughter – Cathryn Marsh
THANK YOU

Kenneth Neil Marsh

27th December 1939 – 27th July 2016