



FCLU Public Seminar

Solar sorption cooling systems for residential applications: options and guidelines



Prof. Wang Ruzhu

President

Shanghai Society of Refrigeration

Abstract

Energy consumption in buildings has been increased in recent years with the development of the economy worldwide, and the energy consumed by buildings accounts for 30% of the total energy used. Thus solar heating integrated with buildings has been thought to be an efficient way to reduce building energy consumption. Solar energy can provide heating, cooling, hot water and even electricity and lighting for buildings, but solar cooling is not popular so far. Solar powered sorption cooling systems have been studied and demonstrated in recent years, which contain adsorption cooling, absorption cooling and desiccant cooling. The various typical systems with small scale for potential residential applications are discussed and analyzed in this presentation, in which the working principals, system suitability for solar cooling, performance, maintenance and economic viability will be discussed. With the analyses and the available real operation systems, the detailed options and guidelines of solar cooling for residential applications are shown.

All Interested Are Welcome

Please register online at http://www.polyu.edu.hk/fclu/seminar/Seminar_17Apr09/

For enquires, please contact Ms Becky Chang at

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Fee : Free of charge

- An attendance certificate will be issued to each registered participant.
- Applicants with confirmed registration who fail to turn up will be put on lower priority in the registration for the next Faculty distinguished lecture or seminar.

About the Speaker

WANG Ruzhu (R. Z. Wang), graduated from Shanghai Jiao Tong University in 1984 and 1987 for his bachelor and master degrees, he got PhD from Shanghai Jiao Tong University in 1990 in the field of Refrigeration and Cryogenics, he was promoted as associate professor in 1992, and professor in 1994. He had been appointed as the director of Institute of Refrigeration and Cryogenics, Shanghai Jiao Tong University since 1993. Prof. Wang has published about 300 journal papers, about 180 of them are in international journals. He has written 5 Books regarding Refrigeration Technologies. His major contributions are adsorption refrigeration, heat transfer to superfluid helium, heat pumps, CCHPs and solar energy systems. He was elected as CheungKong Chaired Professor in 2000 by the Ministry of Education (MOE) of China. Currently he is the president of Shanghai Society of Refrigeration, the vice chairman of Chinese Society of Heat Transfer. Prof. Wang was elected as one of the top one hundred outstanding professors in China Universities by MOE China in 2007.

He is the associate editor of Energy-the international journal, Solar Energy, and Chinese Journal of Solar Energy (Acta Solaries Sinica), Chinese Journal of Refrigeration. He is also the editorial board member of International Journal of Refrigeration, Applied Thermal Engineering, Energy Conversion and Management, Chinese Science Bulletin, Chinese Journal of Chemical Engineering, Chinese Journal of Engineering Thermophysics and Journal of Shanghai Jiao Tong University.

In the last ten years, he was invited to give plenary or keynote lectures in international conferences for 8 times, such as 3 plenary lectures for International Sorption Heat Pump Conference (2002-Shanghai,China; 2005-Denver,USA; 2008-Seoul, Korea), 1 plenary lecture for 7th IIR Gustav Lorentzen Conference on Natural Refrigerants (May 28-32, Trondheim, Norway), 2 keynote lectures for International Seminar of Heat Pipes, Heat Pumps and Refrigerators (Minsk 2001,2005), 1 keynote lecture for International Conference on Multiphase Flow (2004,Japan), 1 keynote lecture for AICARR'2008 (the annual conference of Italy Association of Refrigeration) (2008, Vicenza, Italy).



Date:

17 April 2009

(Friday)

Time:

6:30p.m. to 8:00p.m.

(Refreshments will be served at 6:00p.m.)

Venue:

M1603, Senate Room, 16/F, Li Ka Shing Tower, The Hong Kong Polytechnic University

