



## NICKOLAS J. THEMELIS

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### BIOGRAPHY

Dr. Themelis obtained his B. Eng. (British Association Medal for Great Distinction) and Ph.D. degrees from McGill University (Montreal, Canada) in chemical engineering. In the first ten years of his career, he was

Director of the Engineering Division of the Noranda Research Center in Pointe Claire where he invented and helped develop the Noranda Process for the continuous smelting and converting of copper concentrates and recycled copper and the recovery of sulphur dioxide as sulphuric acid. At present there are several Noranda process plants operating. The largest plant, at Noranda, Quebec, co-processes annually a million tons of copper concentrates from all over the world plus 50,000 tons of electronic waste.

In 1972-1980, Prof. Themelis was Vice President of Technology of Kennecott Corp., the major non-ferrous company at that time. He was appointed as Professor by Columbia University (New York City, U.S.A.) in 1980 and was elected to Stanley-Thompson Chair of Chemical Metallurgy in 1988. He was chairman of the Henry Krumb School of Mines and founded Columbia's Earth Engineering Center in 1996 ([www.columbia.edu/cu/earth](http://www.columbia.edu/cu/earth)). In 1995, he introduced at Columbia University the teaching of industrial ecology to engineers and in 1997 led the transformation of the historic School of Mines to the new engineering discipline of Earth and Environmental Engineering and was first chairman of the new Department. ([www.eee.columbia.edu](http://www.eee.columbia.edu)).

Dr. Themelis has been consultant to industry and government in the areas of process design and management of technical resources. He is member of the U.S. National Academy of Engineering, member of the New York Academy of Sciences, Fellow of the Minerals, Metals, and Materials Society, member of the Metallurgical Society of Canada, Fellow of the Chemical Institute of Canada, member of the Materials and Energy Division of ASME, and member of International Solid Wastes Association.

Prof. Themelis is founder and Chairman of the Global Waste to Energy Research and Technology Council (Global WtERT Council, [www.GWCouncil.org](http://www.GWCouncil.org); [www.wtert.org](http://www.wtert.org)), an international consortium of universities, companies and governmental organizations concerned with the recovery of materials and energy from industrial and municipal wastes by means of recycling, anaerobic digestion, composting, WTE, and landfill gas capture and utilization. GWC has sister organizations in U,S, (CCNY and Columbia). China, India, Germany, France, Colombia, Chile, Brazil, and other countries. The mission of GWC is the advancement of methods for material and energy recovery from urban, industrial, and agricultural wastes.

Prof. Themelis is the recipient of several professional awards (listed below), author of over 200 technical papers and five books, and holder of several patents on metal extraction and refining.

### **AWARDS**

- Phoenix Award of the Confederation of European Waste to Energy Plants (CEWEP; April 2016)
- Medal of Achievement of Materials and Energy Recovery Division, American Society of Mechanical Engineers (May 2008).
- Honorary Member of the Japan Institute of Metals (March 2006)
- Environmental Conservation Distinguished Service Award of the American Institute of Mining, Metallurgical and Petroleum Engineers (AIME) (March 2004).
- ALCAN Award of Canadian Metallurgical Society (1997) for outstanding contributions to mining and metallurgy.
- Best Paper Award (Journal of Thermal Spray Technology, 2002), International Thermal Spray Society
- Best Paper Award, Metallurgical Society of Canadian Institute of Mining and Metallurgy (1993)
- Columbia University 1987 Kohnstamm Prize for Outstanding Contribution to Industrial Chemistry
- 1987 Lecturer of the British Institution of Mining and Metallurgy (1987)
- Two gold medals of the Metallurgical Society of the American Institute of Mining and Metallurgical Engineers (AIME) for best paper published (1968, 1970)
- ERCO award of the Canadian Society of Chemical Engineering (1971).
- Best Paper Award Canadian Metallurgical Society (1993)
- McConnell Environmental Award of the AIME (1984)
- Extractive Metallurgy Lecturer of AIME (1972).

### **PUBLICATIONS OF PROF. NICKOLAS J. THEMELIS (2003-2016)**

## 2016

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[www.waste-managementworld.com/articles/print/volume-14/issue-3/features/uk-waste-management-growing-old-or-growing-clean.html](http://www.waste-managementworld.com/articles/print/volume-14/issue-3/features/uk-waste-management-growing-old-or-growing-clean.html)

C.S. Psomopoulos, I. Venetis and N.J. Themelis: "Impact from implementation of Waste to Energy to the economy of Greece", Fresenius Environmental Bulletin (in press).

Demetra Tsiamis and N.J. Themelis, “Pyrolysis of non-recycled plastics”, Proc. North American WTE Conference (NAWTEC 20), Fort Myers, FL, 2013

Jay Thrasher and N.J. Themelis, “Study of WTE dioxin emissions, in U.S., France and South Korea”, Proc. North American WTE Conference (NAWTEC 20), Fort Myers, FL, 2013

### **2012-2013**

N.J. Themelis, “Encyclopedia of Sustainability Science and Technology” (18 volumes, Springer Pub.), editor of Waste-to-Energy section (2012)

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### **2011-2012**

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## **2006-2007**

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