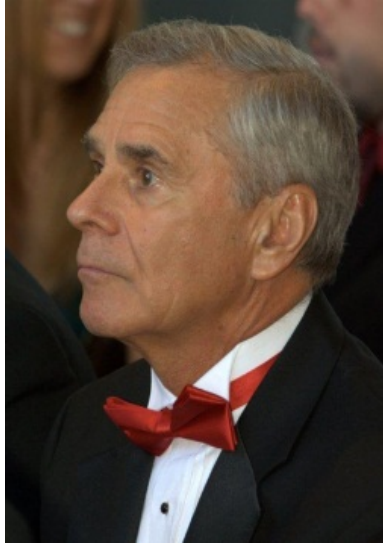


PREFACE: **CLEAN ENERGY FROM THE AMBIENT AIR**



Dear Subscriber!

This Special Issue of International Journal of Energy for Clean Environment that you are holding in your hands or reading on-line is a unique collection of the state-of-the-art research articles devoted to the revolutionary process of dew-point indirect evaporative cooling well-known among the research and engineering community worldwide as the “M-Cycle” (Maisotsenko Cycle). It was named after the Ukrainian-born innovator and inventor, talented researcher and engineer as well as extraordinary person – Professor Valeriy Maisotsenko – who currently resides in Denver, Colorado and serves as Chief Scientist of Coolerado Inc. (www.coolerado.com) – the first company that

successfully commercialized the M-Cycle for air conditioning applications.

There are many good words about Prof. Maisotsenko and M-Cycle that have been already published. He is a bright thermodynamicist, author of over 200 patents and patent certificates as well as numerous technical publications and his many students are located around the globe. So we decided to devote one of the IJECE special issues to this intriguing process that may become a strong foundation for many challenging developments in support of the sustainable energy future on our planet.

The papers you find in this issue are presented by authors and research groups located around the world and they employ a spectrum of research methods and subjects ranging from numerical simulation to experimental evaluation of the M-Cycle processes. The basic principles of the M-Cycle have been formulated over a 30 year period, and now the M-Cycle has begun a thorny pathway to the marketplace!

The M-Cycle is not a “cycle” in the way we define them. It is beyond traditional thermodynamic understanding and representation. The M-Cycle is an indirect evaporative heat transfer process with smart flow arrangement and internal heat regeneration. Such an innovative and promising approach opens up wide horizons for the utilization of the psychometric temperature difference in various energy generating, process heating and mass transfer technologies. Nowadays several transformational energy efficient and cost-effective technologies based on the M-Cycle are under research and development by many scientific and research groups all over the world.

We hope you will find this topic interesting and useful for your mind and endeavors!

JOHN R. LLOYD – Editor-in-Chief

YAROSLAV CHUDNOVSKY – Co-Editor

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