

## Jiří Janata

*School of Chemistry and Biochemistry,  
Georgia Institute of Technology, Atlanta, Georgia/USA*

**Tuesday, 15<sup>th</sup> May 2018, 16:00 s.t.**

TU Wien, Institut für Angewandte Physik, E134  
1040 Wien, Wiedner Hauptstraße 8-10  
Yellow Tower „B“, 5<sup>th</sup> floor, SEM.R. DB gelb 05 B

### **The Greatest Discovery**

**Of interest to Anybody who cares about energy and its impact on environment**

The conversion of matter to energy and successful exploitation of nuclear reactions has been a defining discovery in human history. Originally harnessed for purely military purposes, nuclear energy was next utilized for civilian electrical energy production. The latter has become controversial due to several nuclear industrial mishaps. Of these, the Three Mile Island (1979), Chernobyl (1986) accidents, and the more recent Fukushima Daiichi event (2011), have dominated the discussion. The consequences of the military use of fission have been largely ignored; the radiation legacy of the Cold War has been perceived as a thing of the past. In reality, nuclear materials production activities and weapons testing between 1945 and 1998 have introduced more radiation into the biosphere than all civilian mishaps combined. It is estimated that the most notorious Chernobyl accident represents less than 5% of the total military environmental radiation burden, and that each of the 2053 nuclear weapons tests by far exceeds either the Three Mile Island or Fukushima accidents.

Misconceptions regarding the relative military and the civilian contributions to the collective “nuclear footprint” must be reexamined. There exists a pervasive and fundamental misunderstanding of nuclear and radiation issues by politicians and by the media— that is, by the very people whose thoughts and ideas drive public policy. We can only address this issue with unbiased education. The aim of this lecture is to provide a balanced view of this critically important issue.

All interested colleagues are welcome to this seminar lecture (45 min. presentation followed by discussion)

Friedrich Aumayr  
(LVA-Leiter)

Ulrike Diebold  
(Seminar Chair)