# BGM LECTURE SERIES 'Development of Nanomaterial for Space Science & Applications'











Dr Meyya Meyyappan Chief Scientist for Exploration Technology, Center for Nanotechnology NASA Ames Research Center Mailstop 229-3 Moffett Field, CA 94035 USA

Meyya Meyyappan is Chief Scientist for Exploration Technology at the Center for Nanotechnology, NASA Ames Research Center in Moffett Field, CA. Until June 2006, he served as the Director of the Center for

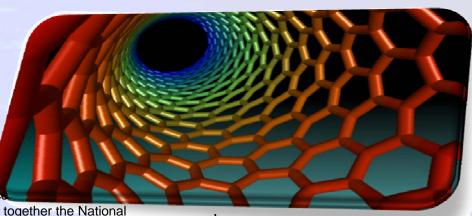
Nanotechnology as well as Senior Scientist. He is a founding member of the Interagency Working Group on Nanotechnology(IWGN) established by the Office

of Science and Technology Policy(OSTP). The IWGN is responsible for putting together the National Nanotechnology Initiative. He is currently World Class University Distinguished Visiting Professor at Pohang University of Science and Technology(POSTECH), South Korea.

For his contributions and leadership in nanotechnology, he has received numerous awards including: a Presidential Meritorious Award; NASA's Outstanding Leadership Medal; Arthur Flemming Award given by the Arthur Flemming Foundation and the George Washington University; 2008 IEEE Judith Resnick Award; IEEE-USA Harry Diamond Award; AlChE Nanoscale Science and Engineering Forum Award. For his sustained contributions to nanotechnology, he was inducted into the Silicon Valley Engineering Council Hall of Fame in February 2009. For his educational contributions, he has received: Outstanding Recognition Award from the NASA Office of Education; the Engineer of the Year Award(2004) by the San Francisco Section of the American Institute of Aeronautics and Astronautics (AIAA); IEEE-EDS Education Award; IEEE-EAB(EducationalActivities Board) Meritorious Achievement Award in Continuing Education.

### **Development of Nanomaterial for Space Science & Applications**

Space applications are constrained by the weight, size and power consumption requirements as every Kg of material lifted to near earth orbit costs about \$ 25000 and to outer planets, an order of magnitude more. There are plenty of opportunities to reduce the size and power consumption of payload instruments, computers, memory etc. using advances in nanotechnology. This presentation will discuss development of chemical and biosensors, radiation resistant memory, detectors and other payload related instruments. Opportunities related to composites and material development will also be discussed since they also contribute directly to the cost and logistics of space flights.



## *January 11<sup>th</sup>, 2010*National Planetarium, KL

9.30 am Registration

### 10.00 am - 12.00 am

Welcome Remarks by Datuk Ir. Hj Ahmad Zaidee Laidin FASc , Chairman, BGM Project Management Committee

Introductory Speech by Prof. Dr. Uda Bin Hashim, Director, INEE, UniMAP

#### Lecture

Speaker: Dr. Meyya Meyyappan Development of Nanomaterial for Space Science & Applications Q&A

12.05 pm

Lunch