PRESS RELEASE

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SINGAPORE-RAISED PROFESSOR OF A TOP US UNIVERSITY TO LEAD A*STAR’S INSTITUTE OF BIOENGINEERING AND NANOTECHNOLOGY

1. Massachusetts Institute of Technology Professor Jackie Yi Ru Ying, has been recruited to lead Singapore’s Institute of Bioengineering and Nanotechnology (IBN)* as its Executive Director with effect from 1 March 2003.

2. In an international recruitment drive, the Agency for Science, Technology and Research (A*STAR) talent-scouted the 36-year-old professor, who has won numerous accolades and awards. Professor Ying was also featured in the centennial issue of MIT’s Technology Review magazine as one of the world’s 100 young people likely to lead 21st Century innovators.

3. Professor Ying has been on the Chemical Engineering faculty at Massachusetts Institute of Technology (MIT) since 1992, and was promoted to Professor in 2001. She is among the youngest ever to be promoted to this rank at MIT.

4. Professor Ying is confident that Singapore has the potential to be a leading Biomedical Science hub. She said: “The mission of IBN is to be a world-class leader in establishing research and create intellectual property in bioengineering and nanotechnology. IBN aims to draw top-notch researchers and business partners to Singapore. It will play an active role in technology transfer and spinning off small companies, linking our research institute and industrial partners to other global institutions.”

5. One of Professor Ying's immediate tasks at IBN, an A*STAR funded institute, is to outline a research strategy based on Singapore’s strengths in engineering and the medical sciences to complement the focus of various A*STAR research institutes. The key A*STAR
research fields include: Genomics, Bioinformatics, Molecular/Cell Biology, Bioprocessing Technology, and Bioengineering. The institutes focusing in these biomedical-based activities will be housed in Biopolis in the second half of 2003, at the One North Biomedical Complex.

6. Chairman of A*STAR, Mr Philip Yeo said: “We are delighted to have Professor Jackie Ying return to Singapore and to lead IBN. She is well-known for her work in advanced inorganic structures for catalytic, membrane, ceramic and biomaterial applications. IBN will foster an exciting and multidisciplinary research environment to train students and young researchers in the frontiers of bioengineering and nanotechnology. I am certain that IBN will succeed in its goals under Professor Ying’s leadership.”

7. Acting Executive Director of the Biomedical Research Council (BMRC), Associate Professor Kong Hwai Loong added: "Having Professor Ying on board will help us tremendously in bringing IBN to the next level. She brings with her much expertise and research experience and will be a great boost to Singapore’s overall biomedical research initiative."
Biodata

Professor Ying was raised in Singapore and New York. She graduated with B.E. summa cum laude in Chemical Engineering from The Cooper Union in 1987. As an AT&T Bell Laboratories Ph.D. Scholar at Princeton University, she began research in materials chemistry, linking the importance of materials processing and microstructure with the tailoring of materials surface chemistry and energetics. She pursued research in nanocrystalline materials at the Institute for New Materials, Saarbrücken, Germany, as NSF-NATO Postdoctoral Fellow and Alexander van Humboldt Research Fellow.

Taiwan-born Professor Ying has chaired the US Department of Energy Workshop on Future Research Needs of Nanofabricated Materials and has organized the Third International Conference on Nanostructured Materials. She also served on the Board of Directors of the Alexander von Humboldt Association of America, the Advisory Boards of 5 international institutes/universities, the Technical Advisory Boards of 6 companies, as well as the editorial boards of 11 archival journals and book series.

Professor Ying’s research is interdisciplinary in nature. Her laboratory has been responsible for several novel wet-chemical and physical vapor synthesis approaches that create nanostructured materials with exceptional size-dependent characteristics. In particular, the engineering of surface reactivity, microstructure and stability for nanoparticulate and nanoporous materials has been the focus targeting the materials needs in the production of fine chemicals and pharmaceuticals, the creation of advanced drug delivery systems and artificial implants, the efficient use of energy and resources, and the control and prevention of environmental pollution.

Prof Ying has received numerous awards for her research and scholarship, including the American Institute of Chemical Engineers Allan P. Colburn Award for Excellence in Publications (2000), Technology Review TR100 Young Innovator Award (1999), American Chemical Society Faculty Fellowship Award in Solid-State Chemistry (1997), Camille Dreyfus Teacher-Scholar Award (1996), David and Lucile Packard Fellowship for Science and Engineering (1995), American Ceramic Society Ross C. Purdy Award for Contribution to the Ceramic Technical Literature (1995), the Office of Naval Research Young Investigator Award (1995), and the National Science Foundation Young Investigator Award (1992). She is the author/co-author of over 130 publications.
Professor Ying is the Molecular Engineering of Biological and Chemical Systems Programme Co-Chair of the Singapore-MIT Alliance (SMA). The Singapore-MIT Alliance is an innovative engineering education and research collaboration among three of the top engineering research universities in the world: National University of Singapore (NUS), Nanyang Technological University (NTU), and Massachusetts Institute of Technology (MIT).
Agency for Science, Technology and Research (A*STAR)

A*STAR aims to foster world-class scientific research and talent for a vibrant knowledge-based Singapore. A*STAR is organised into four key areas: The Biomedical Research Council (BMRC), the Science and Engineering Research Council (SERC), a Corporate Planning and Administration Division (CPAD) and the agency’s commercialisation arm, Exploit Technologies Pte Ltd (ETPL).

Biomedical Research Council (BMRC)

A*STAR’s BMRC (formed in October 2000) oversees and coordinates public sector Biomedical research and development activities in Singapore. The Council also aims to strengthen collaborative public research in the Biomedical Sciences in Singapore.

BMRC’s mission is to:

• Support, sustain and stimulate excellent research directed at maintaining and improving human health
• Train people in high quality skills to meet Singapore's needs of health, quality of life and global economic competitiveness and
• Promote societal awareness of biomedical research.

Institute of Bioengineering and Nanotechnolgy (IBN)

The formation of the Institute of Bioengineering and Nanotechnology (IBN), formerly known as the Institute of Bioengineering (IBE), was endorsed by the International Advisory Council for Singapore’s Biomedical Sciences in March 2002. IBN will conduct research at the cutting-edge of bioengineering and nanotechnology. These research areas include: Delivery of Drugs, Proteins and Genes, Tissue Engineering, Organ Replacement and Assist Devices, Medical Devices, Biological and Biomedical Imaging, and Nanobiotechnology.

For more information on A*STAR, please log on to: http://www.a-star.edu.sg

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