

Opening Keynote by Mr. Bernard Nee, Executive Director New Technologies,
Singapore Economic Development Board,
at the launch of the Industrial Consortia on Nanoimprinting (ICON)
on Tuesday, 3 August 2010
at the Institute of Materials and Research Engineering

Prof Charles Zukoski, Chairman Science and Engineering Research Council, A*STAR

Prof Andy Hor, Executive Director, Institute of Materials Research and Engineering

Distinguished Guests

Ladies and gentlemen

Let me start by first offering my heartiest congratulations to the founding members of ICON on today's official launch. Today's event is a culmination of their hard work these last 6 months, and marks a significant milestone in their collaboration.

SMALL IS BIG

Nanotechnology is big - both in terms of the potential market opportunity that it represents, as well as the number of industries that would be impacted. According to a study by market intelligence firm RNCOS published in March this year, the global market for nanotechnologies is projected to grow at a CAGR of around 20% till 2013. The report also projects the market for nanotechnology enabled goods to be worth US\$ 1.6 Trillion by 2013, representing a CAGR of more than 49%. This growth

is being driven by massive investment in nanotechnology R&D by both governments and corporations across the world. What is perhaps more interesting is that the study also highlighted that the Asia-Pacific region will experience a 52% CAGR in the nanotechnology enabled goods market in the forecast period, ahead of even Europe.

We believe that we are now at the transition period where the huge investments into nanotechnology have started to bear fruit. In discussions with many companies, we are already seeing an increased number of nanotech applications being commercialized.

Regardless of any forecast, it is clear from the trends that many of the industries impacted, for example - electronics, biotechnology, energy, and chemicals - are also important pillars of Singapore's economy. Having recognized this, we have systematically invested in building up both nanotechnology capabilities as well as the nanotechnology industry.

The nanotechnology landscape in Singapore today is a vibrant and dynamic one. We have world-class R&D efforts ongoing in the laboratories of our Universities, as well as in our public Research Institutes. In both our universities, there are cross disciplinary programs such as the Nanoscience and Nanotechnology Initiative (NUSNNI) in NUS and NanoCluster in NTU.

We also have a good mix of MNCs and smaller-sized companies involved in nanotechnology development. Examples include BASF, Bayer, Terra Barrier, and Zyvex Asia. These companies are attracted to Singapore for our stable political and

social environment, our pro-business government, and a well-educated work force. Our highly developed physical and IT infrastructure, combined with its transportation and logistics capabilities, made it an obvious choice for establishing a regional presence. The Asia Nano Forum, a network organization that promote excellence in research, development and the economic uptake of nanotechnology between 15 Asia-Pacific economies, is also based out of Singapore. Moving forward, we hope to see more companies pursuing R&D activities and commercialization of the results from here.

1+1=3

With such a vibrant ecosystem of firms and of research, there are many opportunities for collaboration. Collaborations allow firms to tap capabilities from outside their organizations; and to stretch their limited R&D funds to achieve greater outcome in less time. When executed correctly, collaborations could be the difference between success and failure in an increasingly competitive global marketplace. Public sector by working with industry will also benefit from increased opportunities for their Intellectual properties to be translated to commercial applications.

ICON stands as a poster boy for such partnerships. Firms benefit through being able to leverage on the capabilities in Nanoimprinting that IMRE has built up, and IMRE benefits in having insights from industry to focus their research priorities going forward. Technologies developed through ICON can also be taken to market by companies in the consortium. By working closely on such public-private partnerships, it is win-win for both.

CONCLUSION

In conclusion, nanoimprinting was originally seeded in the semiconductor and data storage industry but has since garnered interest from other fields like optical components and biomedical. This consortium marks the beginning of many new and exciting opportunities for your respective firms, and for Singapore. My hope is for this consortium to grow from strength to strength, attracting new companies from other industries, as well as from other research institutes.

Thank you.