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1 About Asia Nano Forum (ANF)

Asia Nano Forum (ANF) is a **network organization**, founded in May 2004 and a registered society in Singapore, known as Asia Nano Forum Society, since Oct 2007. The mission of ANF is to promote responsible development of nanotechnology that educationally, socially, environmentally and economically benefits each economy by fostering international network collaboration.

ANF Members:

- Austria : Austrian Ministry for Transport, Innovation and Technology (BMVIT)
- Australia: The Australian Nanotechnology Network (ANN)
- Hong Kong: The Hong Kong University of Science & Technology (HKUST)
- Indonesia: Surya University
- Iran: Iran Nanotechnology Initiative Council (INIC)
- Japan: National Institute of Advanced Industrial Science and Technology (AIST)
- Japan : Japan Science and Technology Agency (JST)
- Japan: National Institute for Materials Science (NIMS)
- Korea: Korean Nanotechnology Researchers Society (KoNTRS)
- Malaysia : Nano Malaysia
- Malaysia : National Nanotechnology Directorate (NND)
- Singapore : Institute of Materials Research & Engineering (IMRE)
- Taiwan : Innovation and Application of Nanoscience Thematic Program (IANTP)
- Thailand : King Mongkut's University of Technology Thonburi (KMUTT)
- Thailand : National Nanotechnology Centre (NANOTEC)
- Vietnam : Institute of Materials Science -Academy of Science and Technology (VAST)

2 About ANF Summit 2016

ANF Summit is an annual meeting, wherein top leaders and experts from industry, government, academia and other bodies from the ANF member economies meet to update the developments on Nanotechnology and discuss related issues such as policy, R&D and commercialization, EHS & Standardization, Infrastructure, and Education. The ANF annual general meeting (AGM) will also take place during the summit.

In 2016, the Summit is hosted by the Korea Nano Technology Research Society (KoNTRS), and will be held during July 13-14, 2016, in conjunction with NanoKorea 2016 ([July 13-15, 2016](#)) in Seoul.

Organisers

Asia Nano Forum



Korea Nano Technology Research Society



Organising Committee

ANF Secretariat	Ramam AKKIPEDDI	President of ANF
	Lerwen LIU	Founding Secretary of ANF
	Liuyang ZHANG	Executive Assistant
	Vivilin Synthia GUNASINGH	Executive Assistant
Host Organizers	Ki-Bum KIM	KoNTRS President
	Kyung-Ho SHIN	KoNTRS Executive Vice President

Venue: 4F, KINTEX Exhibition Hall II

Contact: Ms Jooyeun SON: pdjoo@kontrs.or.kr, Ms Hye Jin LEE: hyejin.lee@kontrs.or.kr

3 Welcome Message from Chair, Organising Committee

4 Welcome Message from ANF Secretariat

It gives me great pleasure in welcoming you all to the 13th Asia Nano Forum Summit (ANFoS 2016) organized by the Korean Nanotechnology Researchers Society (KoNTRS) and ANF Society. The summit is organized in conjunction with the NanoKorea event at KINTEX Ilsan, in S. Korea, during, July 13-14 2016.

ANF has been growing since its formation in 2004, in terms of member organizations and activities. On behalf of the executive committee, I would like to welcome two new members, the Japan Science and Technology Agency (JST) from Japan and King Mongkut's University of Technology Thonburi (KMUTT) from Thailand, to this valued ANF community. The inclusion of new partners encourages the ANF members further to collaborate and tap on the expertise residing in the network.

Under the nanopolicy forum session of the Nano Korea event, it is encouraging to note that about eight delegates from the ANF community are participating to share their views with the international gathering. The ANF summit format is designed such that each member economy has an opportunity to update on the developments in nanotechnology, covering broad aspects of research highlights, education, policy matters and funding initiatives. The summit is also a platform for the various working groups on Education, Safety, Standardization, Infrastructure and commercialization, to discuss and initiate future activities and plans with the delegates.

I am delighted to know that this year about 40 delegates from 9 economies (Austria, Hong Kong, Iran, Japan, Malaysia, Singapore, S. Korea, Taiwan, and Thailand) are participating to share their views.

I wish the delegates a pleasant, memorable and fruitful stay in S. Korea with new acquaintances and collaboration opportunities. It is also a great opportunity to take some time out from the formal commitments and enjoy the rich cultural, tourist and culinary experiences of S. Korea.

Finally, I would like to thank all the ANF members and our kind host, KoNTRS for their fantastic support.

I look forward for a productive and successful meeting,

With Best Wishes,

Dr Ramam Akkipeddi

President

Asia Nano Forum (ANF)

5 Summit Program

13TH ASIA NANO FORUM SUMMIT PROGRAM (ANFoS2016)

13 - 14 July 2016, KINTEX, Ilsan, South Korea

Venue: 4F, KINTEX Exhibition Hall

July 12, 2016 (Tuesday)	
	Arrival of Delegates at the The MVL Hotel GOYANG, 20, Taegeuk-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, South Korea
18:30 – 20:30	Welcome Dinner (ANF Summit delegates) Venue: Restaurant in MVL Hotel –TBD
July 13, 2016 (Wednesday)	
Venue: Room #406, KINTEX	
12:00 - 13:15	Opening Ceremony of NANO KOREA 2016
13:30 - 14:00	Welcome Address Prof. Ki-Bum KIM, Organizing Chair of NK 2016 and President of KoNTRS Dr. Hahn Sun-hwa, President of KISTI - TBD
14:00 - 17:30	Nano Policy Forum Session under NANO KOREA 2016 (20 minutes each) • Dr. Hyun Jung LEE (MSIP, Korea) • Prof. Xing ZHU (Peking Univ., China) • Prof. Jun'ichi SONE (JST, Japan) • Prof. Ali BEITOLLAHI (INIC, Iran) • Dr.Sirirurg SONGSIVILLAI (NANOTEC,Thailand) • Dr. Rezal KHAIRI AHMAD (NanoMalaysia, Malaysia) • Dr. Ting-Kuo LEE (Academia Sinica, Taiwan) • Mr Alexander POGANY (BMVIT, Austria) • Dr. Abdul Kadir bin MASROM (SIRIM, Malaysia)
18:00 – 20:00	Networking Dinner Gather in Hotel lobby at 18:00

	Venue: 1F Chinese Restaurant, MVL Hotel
July 14, 2016 (Thursday)	
Venue: Room #403, KINTEX	
09:00 - 09:15	Welcome Address (Dr. Ramam AKKEPEDDI, ANF President)
09:15 - 10:30	Annual General Meeting (AGM) • Roll Call • Adoption of the Agenda • Adoption of Minutes of the last AGM • Financial Statement from the Treasurer • Secretariat Report 2016 • Decision on host, for the next ANF Summit and ANF Camp 2017 • Appointment of two Honorary Auditors
10:30 - 10:45	Tea Break
10:45 - 12:30	ANF AGM – continue • ANF Work Plan 2016 – 2017 ○ Guidelines on ANF Funds: proposed by the Treasurer – Dr. Rezal AHMAD ○ Presentation on new Website – Dr. Lerwen LIU ○ Young Leaders Forum ○ Other proposals/plans
12:30 - 13:30	Lunch Break
13:30 - 15:30	Updates on Nanotechnology Development in Each Economy in 2015-2016 (10 minutes each) Austria: Dr. Andre GAZSO Hong Kong: Dr. Wei HAN Iran: Dr. Ali BEITOLLAHI Japan: Dr.Toshihiko KANAYAMA Korea: Dr. Kyung-Ho SHIN Malaysia: Dr. Rezal KHAIRI AHMAD Singapore: Dr.Pooi See LEE Taiwan: Dr.Ting-Kuo LEE Thailand Dr.Sirasak TEPARKUM Russia: Dr. Andrey MELNIKOV
15:30 - 15:45	Tea Break
15:45 - 17:45	Working Group Presentations

	• Standardization • Nanosafety and Risk Management • Infrastructure and Resources • Education –International NanoOlympiad Forum, ANC2016 and others • Commercialization
17:45 -18:00	Closing Remarks
18:30 – 21:30	NANO KOREA 2016 Banquet Venue: 1F, Hall 6, KINTEX
July 15, 2016 (Friday)	
Nano Korea 2016 and Departure of Delegates	

6 Profile of Delegates

6.1 Austria

Alexander POGANY

Expert on nanotechnology

Austrian Ministry for Transport, Innovation and Technology (bmvit)

Email: Alexander.POGANY@bmvit.gv.at



Mr. Alexander Pogány has his master in Microbiology and worked for about 3 years at Baxter Bioscience as validation expert in the Quality Control. Since 2004 he works as expert in the national and international research policy in the area of industrial technologies (Nanotechnology, Materials research and production). This includes the coordination of research programmes in Production Research and nanotechnology and activities in several international bodies of the OECD and the European commission.

André GAZSO

Chairman

The Austrian Nanotechnology Information Commission of the Austrian Ministry of Health

Email: agazso@oeaw.ac.at



André Gazsó studied Medicine, Biology and Philosophy. He is senior scientist for safety and risks of new and emerging technologies at the Institute of Technology Assessment of the Austrian Academy of Sciences. Since 2013 André Gazsó is Chairman of the Austrian Nanotechnology Information Commission of the Austrian Ministry of Health.

Recently André Gazsó was member of the scientific team to evaluate the German Federal Institute for Risk Assessment (BfR). Moreover, he is currently rapporteur to the Committee of Bioethics of the Council of Europe for converging technologies and emerging risks.

André Gazsó is involved in several risk and safety projects mainly concerning nanotechnologies, gene technology and information and communication technologies. Between 1997 and 2007 he worked at the Department of Risk Research of the University of Vienna (Faculty of Geosciences, Geography and Astronomy). Post gradual training in risk communication (2001, Brussels) and risk management (2004, Vienna; accredited at the Austrian Standards Institute since 2005). Since 1998 leader of several

projects within the EU/Euratom research programme SERF (Socio-economic Research on Fusion) at the Institute of Risk Research, University of Vienna. Since 2002 member of the NoE "Trustnet" and its successor "Trustnet-in-Action", a European network for risk management and risk governance. Since 2003 member, from 2006 to 2008 vice chair of the Standards Committee on "Risk and crisis management" at the Austrian Standards Institute. He is lecturer on risk analysis and risk governance issues regarding new and emerging technologies and holds several teaching positions at the University of Vienna, the University of Natural Resources and Life Sciences, Vienna, and the University of Applied Sciences in Vienna.

Daniela FUCHS

Institute of Technology Assessment at the Austrian Academy of Science

Email :daniela.fuchs@oeaw.ac.at



Daniela Fuchs (born 1987) studied Biology with a focus on Human Ecology at the University of Vienna and the Free University of Brussels, as well as History at the University in Vienna. In her master thesis (MSc) she analysed the possible application of green design principles to, and the importance of sustainability issues for nanotechnologies in selected research facilities in Austria and Germany.

After several internships in different fields of technology assessment and some freelance work in the area of life quality research at the Sustainability European Research Institute (SERI) in Vienna, she currently works on the ITA project NanoTrust (among others). She analyses the integration and distribution of knowledge on nano issues as well as the quality of science communication within the complex field of nanotechnologies.

6.2 Hong Kong

Wei HAN

Research Assistant Professor

Division of Environment at the Hong Kong University of Science and Technology

Email:



He as Research Associate joined the Department of Chemical and Biomolecular Engineering to carry out his postdoctoral research in Prof. King Lun YEUNG's group from June 2008 to March 2014 after he obtained his PhD degree in Physical Chemistry under the supervision of Prof. Guoxing XIONG and

Prof. Weishen YANG from Dalian Institute of Chemical Physics, Chinese Academy of Sciences. He has authored/co-authored 2 book chapters, one invited review and more than 30 peer-reviewed journal papers. He has delivered 4 invited lectures and 6 oral presentations, and held 6 granted patents (Chinese: 2, Hong Kong: 1, US: 2, Korean: 1) and 6 patent applications in the past five years. Two of the patented technologies have been commercialized by companies in Hong Kong and Korea. His research interests include hierarchical porous material, membrane & catalytic membrane reactor, air & water treatment, and antimicrobial technology.

6.3 Iran

Ali BEITOLLAHI

Full Professor

School of Metallurgy and Materials Eng. Iran University of Science & Technology (IUST)

Email: beitolla@iust.ac.ir



Educational History:

- PhD, Leeds University, Materials Science, U.K. 1992.
- Post Doc., Leeds University, U.K .1992- .

Professional history:

- Materials and Energy Research Center (MERK), Tehran, Iran, 1982-1986 , as research assistant.
- Leeds University, School of Materials, Thin Film Group, 1992- as Post Doc.
- Professor at Dept. of Metallurgy & Materials Eng, IUST, 1993-till now.

Industrial research projects: More than 20 successfully finished industrial research projects supported by various Iranian local industries mainly in the field of advanced materials and nanomaterials.

Industrial consultation: Iranian electronic industries; Magnetic ferrite Co. Ltd.

Establishment of Lab: Eelectroceramic & magnetic ferrite, Nanotechnology Center (IUST).

Membership in various institutions & scientific societies:

- Member of Iranian nanotechnology initiative council 2001- till now.
- Member of director board of Iranian nanotechnology society.
- Director of Iranian nanotechnology infrastructure development committee.
- Director of Iranian nanotechnology standardization committee.
- Member of director board of center of excellence for advanced materials (IUST).

- Member of director board of Iranian ceramic society.

Awards granted: □

- Top scientist IUST (2007).
- Top scientist amongst all research institutions and universities in Tehran province (2008).
- Best research award, Mobarakeh Steel Complex (2003).

Ali MARJOWY

Deputy

International collaboration department at INIC

Email: ali.marjovi@gmail.com



Ali Marjowy is a technology entrepreneurship expert, active in technology market for more than 15 years. After graduation from Tehran University with a master in Control Systems Engineering, he founded and directed a technology-based company in automation industry for more than ten years. In 2009 he started a Master of Philosophy course in Technology Policy at University of Cambridge. During his stay in UK, he participated in a Nanotechnology investment appraisal project for an Asia Pacific economy. In 2012 he was appointed as director of a project in Iran focused on expanding application of nanotechnology in water and wastewater treatment. The project was supported by Iran nanotechnology Initiative Council (INIC) and benefited from United Nations Industrial Development Organization's (UNIDO) technical help. Since 2013 he has been working with INIC in international business development, standardization and policy development. He is currently deputy of international collaboration department at INIC.

6.4 Japan

Toshihiko KANAYAMA

Senior Vice-President,

*National Institute of Advanced Industrial Science and Technology
(AIST)*

Email: kanayama.t@aist.go.jp



Dr. Toshihiko Kanayama started his research career in 1977 at the Electron Devices Division in the Electrotechnical Laboratory, AIST Japan, where he worked on semiconductor fabrication process technologies using ion, electron and synchrotron radiation beams. In 1993, he moved to the Joint Research Center for Atom Technology (JRCAT) to develop atomic scale material processing and measurement technology as a group leader. He joined the Advanced Semiconductor Research Center, AIST in 2001 as an executive director, and worked as a sub-leader of the semiconductor MIRAI project. In the project, he managed development of material processing and characterization technology for scaled semiconductor devices. He became director of Nanodevice Innovation Research Center in 2008, and now is serving as Senior Vice-President of AIST.

Major Field:

Material process and characterization technology for nanoscale electron devices

Education:

1975 B.S., Department of Physics, Faculty of Science, University of Tokyo

1977 M.S., University of Tokyo

1990 Dr. Eng., Osaka University

Job history:

1977-1984 Researcher, Electrotechnical Laboratory

1984-1993 Senior Researcher, Electrotechnical Laboratory

1993-2001 Group Leader, Joint Research Center for Atom Technology, National Institute for Advanced Interdisciplinary Research

2001-2008 Executive Director for Research, Advanced Semiconductor Research Center, AIST

2008-2011 Director, Nanodevice Innovation Research Center, AIST

2010-2014 Vice-President, Director General for Information Tech. and Electronics, AIST

2012-2014 Director General for Nanotechnology, Materials and Manufacturing

2013-present Director General, Tsukuba Innovation Arena Headquarters

2014-present Senior Vice-President, and Director, AIST Tsukuba

Yukio KIMURA

Manager

National Institute of Advanced Industrial Science and Technology (AIST)

Email: kimura-yukio@aist.go.jp



Education:

B.A. in Commerce and Business, KEIO University(1989)

MBA. Graduate School of Management, Aoyamagakuin University (1998)

PH-D Candidate, Management, KEIO University (2004)

I am in charge of facility management and international affair of Promotion Center Tsukuba Innovation Arena Headquarters in AIST.

In addition, I am trying to research and promote creating startups systems in TX Line area. I was taking of comparative studied of Academic startups incubations in Europe and USA for a long time.

Toshiki NAGANO

Program Officer

Nanotechnology Platform Japan (MEXT)

Center for Research and Development Strategy (CRDS), Japan Science and Technology Agency (JST)

Email: tnagano@jst.go.jp



Education:

B.A. in Physical Chemistry, Gakushuin University

MBA. Graduate School of Management, GLOBIS University

I am in charge of R&D strategy and promotion of Nanotechnology/Materials fields in Japan. CRDS make proposals not only of important R&D programs on Nanotechnology and Materials but also effective funding system and management by which inter-disciplinary collaboration is promoted among government, academia and industry sectors.

Jun'ichi SONE

Principal Fellow

Japan Science and Technology Agency (JST)

Email: junichi.sone@jst.go.jp



After graduating from the master course of the Science Department of Tokyo University in 1975, Jun'ichi Sone joined NEC Corporation as a research staff of the Central Research Laboratories. He engaged in the research of high-speed semiconductor devices and superconducting Josephson junction devices. He got the Doctor degree of Science in 1983. He was promoted to General Manager of Fundamental Research Laboratories and later Fundamental and Environmental Research Laboratories of NEC Corporation where he directed the research and development of nanotechnology, energy and environment technology, and biotechnology. He became Vice President of Central Research Laboratories of NEC Corporation in 2007. In 2008, he obtained concurrent position of Research Supervisor of the CREST program of JST named "Creation of Nanosystems with Novel Function through Process Integration". In 2010, he joined National Institute for Materials Science as Executive Vice President. He became President of the Society of Nanoscience and Nanotechnology in Japan in 2012. He joined Center for Research and Development Strategy of Japan Science and Technology Agency as Principal Fellow in 2015. He is a member of the Japan Society of Applied Physics (JSAP) and obtained an award of JSAP Fellow in 2008.

Masahiro AOYAGI

Director

*Collaboration Promotion Unit, Tsukuba Innovation Arena (TIA)
Central Office*

E-mail: m-aoyagi@aist.go.jp



Masahiro Aoyagi received the Bachelor of Engineering in Electronic Engineering from Nagoya Institute of Technology, Nagoya, Japan, in 1982; and the Doctor of Engineering degree in Electronic Engineering from Nagoya Institute of Technology, in 1991.

He joined Electrotechnical Laboratory (ETL), Tsukuba, Japan, in 1982, where he has been engaged in the research and development of Nb, NbN superconducting devices and Josephson integrated circuits until 1994, for establishing Josephson Computer Technology. He has been engaged in that of high speed signal measurement technology until 2000. He worked in opto-electronic sampling measurement technology as a guest researcher in National Physical Laboratory (NPL), Teddington, UK, from 1994 to 1995. ETL was reorganized into National Institute of Advanced Industrial Science and Technology (AIST) in 2000. He was a group leader of High Density Interconnection Group, Nanoelectronics Research Institute (NeRI), AIST from 2000 to 2011. He worked as a team leader specified for fundamental 3D LSI chip stacking technology in the national R&D project of High Density Electronic System Integration from 1999 to 2004. He was also a team leader of Opto-Electronic System Integration Collaborative Research Team, NeRI, from 2004 to 2009. He was a group leader of 3D Integration System Group, NeRI from 2011 to 2014 and also a deputy director of NeRI from 2012 to 2014. He has been a director of Collaboration Promotion Unit, Tsukuba Innovation Arena (TIA) Central Office since 2015.

His present research fields are high-speed high-density electronic packaging and interconnection technology including 3D LSI chip stacking, MEMS device packaging, and power electronics packaging.

Masahiro Aoyagi was awarded the Tsukuba prize of 1991 for the development of Josephson prototype computer ETL-JC1. He has authored or co-authored 280 technical papers and has 140 patents.

He has been an IEEE CMPT member since 1998. He has been involved in the technical committee of Electronics Packaging Technology Conference (EPTC), IEEE CPMT Symposium Japan (ICSJ), International 3D System Integration Conference (3DIC) and International Conference of Electronic Packaging (ICEP). He was the chair of IEEE CMPT Japan Chapter from 2009 to 2010. He has been a BoG member of IEEE-CMPT since 2012.

He holds memberships of Institution of Engineering and Technology (IET), International Microelectronics and Packaging Society (IMAPS), Society of Photo-Optical Instrumentation Engineers (SPIE), American Society of Mechanical Engineers (ASME), Institute of Electronics Information and Communication Engineers (IEICE), Japan Institute of Electronics Packaging (JIEP), Institute of Electrical Engineers of Japan (IEEJ), and Japan Society of Applied Physics (JSAP).

Masahiro TAKEMURA

Research Manager of Structural Materials for Innovation (SM4I), the Cross-ministerial Strategic Innovation Promotion Program (SIP), sponsored by the Cabinet Office of the Government of Japan.

Email: masahiro.takemura@jst.go.jp



Masahiro Takemura received Bachelor Degree and Master Degree in aeronautics in 1985 and 1987, respectively, from the University of Tokyo. In 1987, he entered NKK Corporation and had been a researcher in charge of the development of heat resistant and corrosion resistant materials including Ni-base alloys, stainless steels, and low-alloy steels. In 1993, he was sent to the University of Illinois at Chicago in the US to study high temperature corrosion and received Master Degree in Metallurgy in 1995.

In September, 2003, Masahiro Takemura was moved to the National Institute for Materials Science (NIMS), mostly responsible for international collaboration in nanotechnology as Office Chief of International Affairs Office, including the secretariat of the World Materials Research Institute Forum (WMRIF), the Asia Nano Forum (ANF), and the International Nanotechnology Conference on Communication and Cooperation (INC). He was also a member of OECD Working Party on Nanotechnology (WPN). In April, 2014, he was transferred to the Japan Science and Technology Agency (JST) and has been engaged in SM4I since then.

6.5 Korea

Kyung-Ho SHIN

Dr. / Director General

Technology Policy Research Institute,

Korea Institute of Science and Technology

Email: kshin4599@gmail.com, kshin@kist.re.kr



Graduating from University of Pennsylvania in 1992, Dr. Shin joined Korea Institute of Science and Technology (KIST). He has researched on 'Spintronics' for 25 years or so. He is currently working as the Director General of 'Technology Policy Research Institute' as well as a professor at University of Science and Technology. He had worked for Knogo Inc. located in New York as a senior researcher for 4 years while studying in the States. He received the Academic Awards in 2006 and 2013 by the Korean Magnetics Society (KMS) and in 2011 by the Korean Institute of Metals and Materials(KIM). In 2009, he was awarded the prize of National Science and Technology by the Prime Minister. He was selected as the Exemplary Staff in 1995 at KIST. He also received 'Distinguished Research Team Award' in 2001, 2006 and 2009. His major interests have been in magnetic media and heads for HDD, and materials and devices for spintronics. He was awarded about 50 patents and more than 200 peer-reviewed international journal papers including Nature and PRL. He succeeded in performing his duty as the treasurer of Intermag1999. He also served as a program committee member of Intermag2005, a member of the International the Advisory Committee of ISPM2005 and ISAMT2005, the program chair of ISAMMA2007 and NANO KOREA 2011, and the conference chair of ICAUMS2010, ENGE2014, and NANO KOREA 2014, 2015 and 2016. He is currently an executive vice-president of Korea Nano Technology Research Society (KoNTRS).

6.6 Malaysia

Abdul Kadir MASROM

General Manager, Nanotechnology Focal Point, SIRIM Berhad.

Email: akadir@sirim.my



General Manager – Nanotechnology Focal Point (Starting January 2012): New office setup under Vice President R&T Division, established with objective to enhanced SIRIM Nanotechnology involvement across technology centers and act as focal point for nanotechnology ventures for SIRIM. Have prepared roles, direction and scope for the center. Among major initiative perform during this period include;

Lead research team from SIRIM in preparing proposal and bidding for FP7 project for photocatalysis for EU-ASEAN consortium. Responsible in gathering a team from ASEAN that include VAST Vietnam, LIPI Indonesia, NUS Singapore, UP Philippines, Nanotech Thailand and WAITRO.

Involved in six weeks brain storm program for SOLAR under Electric Electronic Sector organized by Performance Management & Delivery Unit (PEMANDU) under Prime Minister Department in preparing and formulate strategic initiatives and program for the country to be include in The Economic Transformation Programme (ETP). ETP is a focused, inclusive and sustainable initiative that will transform Malaysia into a high-income nation by 2020. Lead one initiative identified under PEMANDU – Development of indigenous solar cell technology. Responsible in preparing project proposal for Thin Film Solar Cell pilot manufacturing and proposal for solar farm 30MW in collaboration under Public-Private Partnership. Project will involve innovative indigenous technology development for manufacturing of flexible solar cell with support from private company and government.

Representing SIRIM as Technical Champion under Global Research Alliance – involved technology development applicable for developing countries through “Inclusive Innovation”. Task includes preparing proposal and SIRIM technology profile for inclusive innovation to provide total solutions to be offered to developing countries.

Lead an initiative for setting up SIRIM's University under Private Higher Education Initiatives for Post Graduates study. Preparing a strategic and business plan for SIRIM involvement in private higher educations. Carry out feasibility study and negotiation with potential partner for setting up the university.

Secured RM 2 Million Funding for 2012 from government for R&D Solar activity and IP generation – to perform R&D in supporting Malaysian Solar Industry and to generate IP for solar research.

Rezal Khairi AHMAD

Chief Executive Officer

NanoMalaysia Berhad

Email: rezal@nanomalaysia.com.my



Dr. Rezal Khairi Ahmad was appointed as the Chief Operating Officer of NanoMalaysia in June 2012. As NanoMalaysia first employee, he crafted the company structure, developed business model and corporate positioning strategy relative to like-minded government agencies and relevant industries. As a result in February 2013, Dr Rezal's appointment was upgraded to Chief Executive Officer.

Between August 2012 and February 2013, he also served as Acting Under-Secretary of National Nanotechnology Directorate, Ministry of Science, Technology and Innovation of which he played a role in drafting the National Nanotechnology Policy document. His first two years as the CEO of NanoMalaysia, from June 2012 to May 2014, came under secondment from Khazanah Nasional, an investment arm of the Government of Malaysia. Prior to that, Dr. Rezal assumed the post of Manager

at GEMS Sdn. Bhd from June 2011 to May 2012. He started his career as an academic staff at Tenaga Nasional University in 1998 and had a stint as an Electronic Engineer in the ICT Division of Tenaga Nasional. He also held the Business Development Manager position in a local ICT private company from 2000 to 2001.

In 2014, he helped crafted out Malaysia's National Graphene Action Plan 2020 and co-authored chapters pertaining to innovation, commercialization and industrial development under the 11th Malaysia Plan.

He holds a PhD in Nanotechnology, Electronic/Electrical Engineering from London Centre for Nanotechnology, University College London as the first Khazanah PhD Scholar from 2007 to 2010 and a number of publications in high impact journals. Whilst pursuing his PhD, he also covered a MBA elective at London Business School and business courses at UCL. He obtained his Master's degree in Electrical Engineering from Tenaga Nasional University and graduated in 1998 with a Bachelor's degree in Electronic/Electrical Engineering from University College London, United Kingdom as a Yayasan Tenaga Nasional Scholar.

Leading a balanced life, he plays basketball and undergoes strength training regularly. He is also a fan of the arts of self-defense particularly Wing Chun kung fu and Kendo. When inspired, he plays the bass guitar in his spare time.

6.7 Singapore

Wee Shong CHIN

Associate Professor

Department of Chemistry, Faculty of Science

National University of Singapore

E-mail: chmcws@nus.edu.sg



Synthesis and studies of nanostructured and hybrid materials

- Size- and morphology-controlled synthesis, fabrication of various core-shell and multilayered

nanostructures, preparation of doped nanomaterials, nanocrystals-polymer

composites, hybrid materials, carbon nanotubes and graphene oxide composites

Physical properties and applications of nanomaterials and composites

- Optical and nonlinear properties, bio- and chemical sensors, photoelectrochemical properties

of nanomaterials, photocatalysis, water splitting and CO₂ fixation, nanostructures designed

for electrochemical capacitors, materials for hydrogen fuel cells.

Book published

· “Science at the Nanoscale - An Introductory Textbook”, Chin W. S., Sow C. H., Andrew

Wee T.S., Pan Stanford Publishing, 2010.

Selected Publications

1. *Slow Down of Charge Transfer Owing to Auger Recombination and Two-Photon Action*

Cross-Section of CdS–CdSe–CdS Segmented Nanorods, Radhu Subha, Venkatram Nalla,

Eugene J. Q. Lim, Cherianath Vijayan, Barry B. S. Huang, Wee Shong Chin, and Wei Ji, *ACS*

Photonics, 2015, 2 (1), pp 43–52.

2. *Cobalt-based compounds and composites as electrode materials for high- performance*

electrochemical capacitors, K K Lee, W S Chin, C H Sow, *Featured article, J. Mater. Chem. A*, 2014, 2 (41),
17212 - 17248.

Ramam AKKIPEDDI

President of Asia Nano Forum (ANF)

Senior Scientist III, Advisor,

*SERC Nanofabrication and Characterisation , Institute of Materials
Research and Engineering (IMRE)*

E-mail: ram-akki@imre.a-star.edu.sg



Dr. Ramam Akkipeddi has been in the field of semiconductors for the last over 30 years. He started his career with the Defense R & D labs in India working on GaAs based millimeter wave (mmW) devices and Monolithic Microwave Integrated Circuits (MMICs). He was awarded the “Young Scientist” award for developing a process for 94GHz beam lead Schottky diode. He worked with SGS-Thompson Microelectronics, Singapore as a senior manufacturing engineer before joining the National University of Singapore where he specialized in the growth of arsenide based epitaxial materials by MBE. For over 15 years, he worked in the fabrication aspects of GaN based LEDs and integration of InP based photonic devices with MEMS, before he moved to Industry alliance activities.

He is a senior member of IEEE and has organised/chaired a number of symposia in international conferences. He is the vice-president of Asia Nano Forum (ANF), a network society of 15 Asian organizations and the Singapore Delegation Leader of the ISO/TC 229 mirror group on nanotechnologies. He is the recipient of A*STAR’s top award, the STAR Employee Award, for the year 2011 and is currently senior scientist III/Advisor to the SERC nanofabrication and characterization (SNFC) group at IMRE. He is also an Adjunct Associate Professor, with the School of Materials Science and Engineering (MSE), at NTU.

Pooi See LEE

Professor and Associate Chair

Materials Science and Engineering, Nanyang Technological University

Email: pslee@ntu.edu.sg



Pooi See Lee is a tenured professor in the School of Materials Science and Engineering (MSE), Nanyang Technological University, Singapore. She received her Ph.D. from the National University of Singapore in 2002. After working on technology and development in the semiconductor industry for two years, Pooi See joined the Nanyang Technological University, Singapore. She is a recipient of the 2001 Norman Hackerman Young Author award presented by the Electrochemical Society, USA. She was awarded the Tan Chin Tuan Fellowship in 2006. Pooi See was selected as a Fellow in the Hanse Wissenschaftskolleg Institute of Advanced Study in Germany in 2011. She has authored and co-authored more than 190 publications in the field of nanomaterials for electronics and energy such as nanowire sensors, supercapacitors, electrochromics, piezo-energy, stretchable and flexible devices. She has more than 20 patents filed, she has authored 6 invited book chapters and published a book as co-editor. She serves as the Associate Chair in MSE since 2012. She is a member of the Materials Research Society and Institute of Engineers Singapore. She has been an organizer, chair or session chair for many international conferences. She is in the advisory board of Advanced Energy Materials and Scientific Report, she has also guest edited special issues in the journals of Small and Advanced Materials.

6.8 Taiwan

Kai Feng HUANG

Professor

National Chiao Tung University

Email: kfhuang@cc.nctu.edu.tw



Education:

1976-1982 Ph. D in Physics, University of Illinois, Champaign, IL. U.S.A

1972-1976 B.S. in Physics, National Taiwan University

Professional experience

1989-90 Bell Laboratories Visiting Scientist

1993-96 Chairman Department of Electrophysics, Chiao Tung University

1988- Professor at Department of Electrophysics, Chiao Tung University

Research Interests

Quantum-Classical Correspondence Quantum Billiard, Vortices in Large Area VCSEL
Coherent Waves and Degenerate Laser Cavity Vector Singularity and Singular Optics
Random Laser, Disorder and Wave Chaos Pattern Formation and Directional Emission
Semiconductor Saturable Absorber Mirror.

Wei-Fang SU

Professor

National Taiwan University, Taipei, Taiwan

Email: suwf@ntu.edu.tw



Education:

1974-1978 Ph.D. University of Massachusetts, Amherst, MA., USA
1978-1979 Postdoctoral Fellow in the Materials Research Center of Northwestern University, USA

Summary:

1996-2009 Professor of Department of Materials Science and Engineering, National Taiwan University
2015 Visiting Professor in Department of Ophthalmology, Medical School, Harvard University
2010 Visiting Professor of Materials, University of California at Santa Barbara, USA
2004 Visiting Professor at Swiss Federal Institute of Technology, Lausanne, CH
1980-1996 Fellow Scientist at Westinghouse Science & Technology Center (Pittsburgh, Pa), USA
1990 Visiting Scientist at the Materials and Devices Laboratory of Mitsubishi Electric Corporation (Amagasaki, Japan).

Ting-kuo LEE

*Distinguished Research Fellow and Director
Institute of Physics, Academia Sinica, Taiwan
Email: tklee@phys.sinica.edu.tw*



Dr. Ting-kuo Lee has been widely recognized in the area of theoretical condensed-matter physics, including being named a Fellow of the American Physical Society, the Institute of Physics in UK, and Physical Society of Republic of China.

He has made seminar contribution to the understanding of strongly correlated electronic systems, in particular, high temperature superconductors. He has been also heavily involved in the development of nano science and nano technology in Taiwan. He was the Director of the National Program of Nanoscience and Nanotechnology in 2004-2006, and the Innovation and Application of Nanoscience Thematic Program (IANTP) since 2014. He also has served as the Director of Academia Sinica Research Program on Nanoscience and Nanotechnology since 2004.

Dr. Lee's Research Interest :

Strongly correlated electronic materials, superconductivity, thermal electric materials, optimization method, 3D image reconstruction and quantitative analysis.

6.9 Thailand

Sirasak TEPARKUM

*Deputy Executive Director
National Nanotechnology Center (NANOTEC), National Science
and Technology Development Agency (NSTDA)
Email: sirasak@nanotec.or.th*



EDUCATION

Plant Science, Biology, Genetic

- B.S. (Horticulture) Kasetsart University, Thailand
- B.S. (Biology) Concord College, USA
- M.S. (Horticulture) Virginia Polytechnic Institute and State University, USA
- Ph.D. (Horticulture) Virginia Polytechnic Institute and State University, USA

PROFESSIONAL EXPERIENCES

Business Development; Technology Management; Strategic Planning; Research Coordination; Scientific Writing; Book Editing

2004 – present: Serve as an Executive Administrator, Technology Transfer Director, the Secretariat of Nanosafety Committee (NANOTEC), and the Secretariat of Nanotechnology Association of Thailand.

Responsible for: 1) Business Development Unit; managing technology transfer thru IP management and contract research 2) Nanosafety Alliance Unit; establishing national nanosafety strategic plan and nanosafety guideline 3) R&D Support Division; providing grant and support for research and development in nanotechnology.

Key Achievements:

- Established NanoTextile Flagship Program at NANOTEC and serves as a Program Director
- Established and coordinated Textile Cluster of National Science and Technology Development Agency (NSTDA);
- Established business development unit to bridge the gap between research and market;
- Established 5 nanotechnology curriculums for teachers, students, and entrepreneurs;
- Established nano-safety program for NANOTEC;
- Developed Master Plan (or 5-Year Strategic Management Plan) for NANOTEC
- Established Nanotechnology Association of Thailand
- Established National Nanosafety Strategic Plan

Surawut CHUANGCHOTE

*Researcher, The Joint Graduate School of Energy and Environment (JGSEE),
King Mongkut University of Technology Thonburi (KMUTT)*

Email: surawut.chu@kmutt.ac.th / wut136@hotmail.com

EDUCATION

- 2006-2009 Ph.D. (Energy Science) GPA: 4.00
Institute of Advanced Energy, Kyoto University, Kyoto, Japan
- 2004-2006 M.Sc. (Polymer Science) GPA: 3.98
The Petroleum and Petrochemical College (PPC), Chulalongkorn University,
Bangkok, Thailand
- 2000-2004 B.Eng. (Petrochemical and Polymeric Materials Engineering) GPA: 3.39 (2nd
Class Honors) Faculty of Engineering and Industrial Technology, Silpakorn
University, Nakhon Pathom, Thailand

PROFESSIONAL EXPERIENCES

Business Development; Technology Management; Strategic Planning; Research Coordination; Scientific Writing; Book Editing

2012 – present: Researcher, The Joint Graduate School of Energy and Environment (JGSEE),
King Mongkut University of Technology Thonburi (KMUTT)

Jun. 2012-Nov. 2014: Invited Lecturer, Faculty of Engineering and Industrial Industry, Silpakorn University

Key Achievements:

- First Place, Science as Art Winner, 2010 MRS Spring Meeting, Materials
- JSPS Postdoctoral Fellowship, Japan Society for the Promotion of Science (JSPS), Japan
- Excellent Poster, the 54th meeting of the Society of Polymer Science (Kansai Regional Chapter), the Society of Polymer Science, Japan
- Monbukagakusho Scholarship, Japanese Government, Japan
- Participate in many projects such as Development of Electrospun Titanium Dioxide Nanofibers for Uses as Photocatalysts for Upgrading of Sugars to High-Value Chemicals (NRCT, 2015-2016)

Selected Publications:

1. Pitt Supaphol, Pornanong Aramwit, Pakakrong Sangsanoh, Sutheerat Changsarn, Surawut Chuangchote and Melgardt M. de Villiers, "Conductive Polymers: Materials and Applications," in Novel Polymers and Nanoscience (Mohsen Adeli, Ed.), Transworld Research Network, Kerala, 155-180, 2008.
 2. Surawut Chuangchote, Takashi Sagawa, and Susumu Yoshikawa, "Fine Structured TiO₂ Nanofibers with High Surface Area for Solar Energy Applications," in Renewable Energy and Environment for Sustainable Development (V. K. Vijay and H. P. Garg, Eds.), Narosa Publishing House, New Delhi, 478-483, 2009.
 3. Lea Macaraig, Surawut Chuangchote, and Takashi Sagawa, "Fabrication of Strontium Titanate Nanofibers via Electrospinning," in Zero-Carbon Energy Kyoto 2012, Green Energy and Technology (Takeshi Yao, Ed.), Springer, Japan, 141-148, 2013.
 4. Surawut Chuangchote and Takashi Sagawa, "Electrospun nanofibers for energy and environmental Applications," in Application of Electrospun Nanofibers in Organic Photovoltaics, Nanostructure Science and Technology Series (Bin Ding, Jianyong Yu, Eds.), Springer, 141-162, 2014.
-

Sarawut CHEUNKAR

Lecturer

King Mongkut's University of Technology Thonburi (KMUTT)

Email: sarawut.che@mail.kmutt.ac.th

Education:

Ph.D. in Chemistry, Pennsylvania State, Pennsylvania, USA May 2013

B.S. in Chemistry (Honors), Mahidol University, Bangkok, Thailand March 2004

Professional Experience:

Lecturer, Biotechnology, KMUTT 2013-present

Staff Research Associate, University of California, Los Angeles, USA 2010-2012

Graduate Research Assistant, Pennsylvania State University 2006-2009

Teaching Assistant, Pennsylvania State University 2007-2008

Teaching Assistant, Mahidol University 2004-2005

Honors and Awards:

TRF Institutional Research Grant 2014-2017

Royal Thai Government Scholarship, SFR 2006-2011

Professional Service:

Junior Science Talent Project (JSTP) Panel Member, NSTDA 2013-present

Symposium Organizing:

PACCON 2015, "Innovative Chemistry for Sustainability of the AEC and

Beyond"; Chair Committee

2015

ASEAN plus 2013, "The 2nd Regional Symposium on Biosensors,

Biodiagnostics, and Biochips"; Committee

2013

Publication:

From Weiss Group:

- 1) Claridge, S. A., Liao, W. -S., Thomas, J. C., Zhao, Y., Cao, H., Cheunkar, S., Serino, A. C., Andrews, A. M., and Weiss, P. S. From the Bottom Up: Dimensional Control and Characterization in Molecular Monolayers. *Chem. Soc. Rev.* 2013, 42, 2725-2745.
- 2) Liao, W. S., Cheunkar, S., Cao, H. H., Bednar, H. R., Weiss, P. S., and Andrews, A. M. Subtractive Patterning via Chemical Lift-Off Lithography. *Science* 2012, 337, 1517-1521.
- 3) Zheng, Y. B., Payton, L., Chung, C. -H., Liu, R., Cheunkar, S., Pathem, Y., Yang, Y., Jensen, L., and Weiss, P. S. Surface-Enhanced Raman Spectroscopy to Probe Reversibly Photoswitchable Azobenzene in Controlled Nanoscale Environments. *Nano Letters* 2011, 11, 3447-3452.
- 4) Zheng, Y. B., Kiraly, B., Cheunkar, S., Huang, T. J., and Weiss, P. S. Incident-Angle-Modulated Molecular Plasmonic Switches: A Case of Weak Exciton-Plasmon Coupling. *Nano Letters* 2011, 11, 2061-2065.
- 5) Vaish, A., Shuster, M. J., Cheunkar, S., Weiss, P. S., and Andrews, A. M. Tuning Stamp Surface Energy for Soft Lithography of Polar Molecules to Fabricate Bioactive Small-Molecule Microarrays. *Small* 2011, 7, 1471-1479.
- 6) Vaish, A., Shuster, M. J., Cheunkar, S., Singh, Y. S., Weiss, P. S., and Andrews, A. M. Native Serotonin Membrane Receptors Recognize 5-Hydroxytryptophan-Functionalized Substrates: Enabling Small-Molecule Recognition. *ACS Chem. Neurosci.* 2010, 1, 495-504.

Werasak SURAREUNGCHAI

Chair, Nano@KMUTT cluster and graduate programme

Associate Professor, School of Bioresources and Technology

Associate Dean School of Bioresources and Technology

Head, Bio- and Chemical Sensor Research Group, PDTI, KMUTT

Chair, Junior Science Talent Project, KMUTT and NSTDA

Email: werasak.sur@kmutt.ac.th (or) werasak@pdti.kmutt.ac.th

Education:

Year Institutions Degree Field

1996 Cranfield University, UK Ph.D. Electroanalytical Chemistry

1987 KMITT M.Sc. Biosensors

1983 Silpakorn University B.Sc. Chemistry & Biology

Selected Publications:

1. Cheeveewattanagul, N., Rijiravanich, P., Surareungchai, W., Somasundrum, M., Loading of silicon nanoparticle labels with redox mediators for detection of multiple DNA targets within a single voltammetric sweep, J. Electroanal. Chem. In Press
2. Lertanantawong, B., Surareungchai, W., O'Mullane, A.P., Utilising solutiondispersed platinum nanoparticles to direct the growth of electrodeposited platinum nanostructures and its influence on the electrocatalytic oxidation of small organic molecules, J. Electroanal. Chem. In Press
3. Krissanaprasit, A., Madsen, M., Knudsen, J.B., Gudnason, A.D., Surareungchai, W., Birkedal, V., Gothelf, K.V., Programmed Switching of Single Polymer Conformation on DNA Origami, ACS Nano, 2016, 10, 2243-2250.
4. Vijian, D., Chinni, S.V., Lee, S. U., Lertanantawong, B., Surareungchai, W., Non-protein coding RNA-based genosensor with quantum dots as electrochemical labels for attomolar detection of multiple pathogens, Biosens. Bioelectron., 2016, 77, 805-811.
5. Vijitvarasan, P., Oaew, S., Surareungchai, W., Paper-based scanometric assay for lead ion detection using DNAzyme, Anal. Chim. Acta, 2015, 896, 152-159.

6.10 Secretariat

Lerwen LIU

Managing Director of NanoGlobe Pte Ltd

Founding Secretary of Asia Nano Forum

Adjunct Associate Professor, Faculty of Engineering, National University of Singapore

www.nano-globe.biz

lerwen@nano-globe.biz



Dr Lerwen Liu is one of the most connected persons especially in the field of nanotechnology with expertise ranging from policy, R&D, business development, investment and education. Since 1999 she has been providing strategic services to government agencies, R & D institutions and industries

around the world through insightful reports covering policy, technology & capability assessments and commercialization & investment strategy. In addition to her business development services for research institutes and start-ups transferring their innovations to customers around the world, Dr Liu provides strategic advisory services to government and investment bodies in developing ecosystem framework for new industry enabled economic development. Since 2014, she created and taught an interdisciplinary program focusing innovation and entrepreneurship for sustainability at NUS.

She founded and co-founded a number of companies covering industries ranging from advanced manufacturing, waste water treatment, marine, space to investment. She is the founding secretary of the Asia Nano Forum connecting 16 economies in the Asia Pacific region and beyond fostering collaborations among its members (leading government and R&D institutions) in Nanotechnology strategic policy, standardization, nanosafety, R&D, infrastructure sharing, education and commercialization.

She is a frequent invited speaker at and organizer/moderator of various international conferences/workshops, high level summit meetings, and strategic industry round tables interacting with stakeholders from government, science & engineering, arts & social science, business and the public.

She is an Australian citizen and currently based in Singapore.

Liuyang ZHANG

Executive Assistant of ANF

Research Engineer, Department of Materials Science and Engineering, National University of Singapore

Email: zhangliuyang@u.nus.edu, liuyang@asia-anf.org



Ms. Zhang just finished Ph.D, at NUS. Her research interest mainly focuses on fabrication of supercapacitors using nano-materials as the electrode. Supercapacitors (SCs), also known as electrochemical capacitors (ECs), have many advantages. The most intriguing one is the ultrahigh power density resulting from the fast charge-discharge. Besides, the long cycle life, 100-1000 times longer than batteries, inevitably earns itself an important place in all of the energy storage devices. Additionally, she is interested in synthesis of nanomaterials with different morphologies and application of energy conversion and harvesting. She joined ANF in April 2016 as an Executive Assistant working with ANF executives and members in producing newsletters, coordinating events and communications.

Vivilin Synthia GUNASINGH

Executive Assistant of ANF

Department of Electrical and Computer Engineering

National University of Singapore

Email:synthia.singh@gmail.com



Vivilin Synthia Gunasingh is currently a Masters student at the Department of Electrical and Computer Engineering at National University of Singapore. Her Research focus is on Neural Prostheses. Currently she works on building Flexible and Non-Invasive Neural electrodes for neural simulation and recording at Singapore Institute of Neurotechnology, Sinapse. She has been an integral part of the development of Parylene/Gold Sheet Electrode. She graduated from Pondicherry University in 2014 with a degree in Electronics and Communication Engineering, and has worked as a Networking Engineer at Aricent. She aims to work in the field of Bionics, especially Neural Prostheses. She has also been conferred the Best Student Award by the Government of Puducherry. She is also a national level chess player and a quizzer. She works as the Executive Assistant at Asia Nano Forum supporting ANF executives and members in organizing ANF summit and other event.