Each month ACN asks a team member to provide a profile of themselves that takes us behind the scenes on what are the influences that encouraged their career choices.

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Q&A with Johan S Basuki

Johan S. Basuki was born in Bogor, Indonesia. He attained a Diplom Ingenieur (equal to Master of Science) degree from the Technische Universitaet Darmstadt in Germany. He did his thesis on the organic synthesis in microreaction system at Merck KGaA in Darmstadt, Germany and was offered a job in Singapore after his graduation. At Merck Singapore he started his industrial career in the development of process chemicals for semiconductor manufacturers. When the business was acquired by BASF, Johan continued to develop his project management skills in product management and technical marketing of electronic chemicals. Since he has always been fascinated with chemical research and development, he was offered to participate in a pharmaceutical research internship in Cambridge, MA, USA. At Infinity Pharmaceuticals Inc. and Broad Institute (of MIT and Harvard) he acquired research skills in the discovery of cancer drug targeting the anti-apoptotic Bcl2 and the development of oral formulations for Hsp90 inhibitors. After the end of this 18-months collaborative program he returned to Singapore to work in the new BASF Research Centre for Nanotechnology. His work involved the synthesis and development of conjugated polymers for printed electronics applications (e.g. RFID tags, biosensors, OLED displays and solar cells), which has resulted in the generation of two patents.

After three years of research at BASF, Johan decided to pursue PhD, in order to advance his career in the chemical research and development. Since 2011 he accepted an international research scholarship offer from the University of New South Wales and joined the Australian Centre for NanoMedicine. Under the supervision of Dr Cyrille Boyer and Prof Thomas Davis, he has been working on the synthesis and development of multi-functionalized magnetic nanoparticles for magnetic resonance imaging and cancer drug delivery applications. He has presented his work in Warwick Polymers conference in 2012 and worked on glycopolymers at Prof David Haddleton’s laboratory for 2.5 months at the University of Warwick, UK.

His research interests include the synthesis of functional polymers and development of hybrid systems for pharmaceutical and electronic applications. In particularly, he is interested in the structure-activity/property-relationships of hybrid polymeric systems that can be extended efficiently to solve specific problems, such as stabilization and (bio)functionalization of nanoparticles for diagnostic imaging and chemotherapeutic delivery purposes.

What was your inspiration in becoming a chemist?

Nature! How nature works. It shows vast chemical processes that each of them has been regulated in an amazing mechanism. I would love to learn more about the chemistry of life and nanotechnology. The more I learn about their complexity, the more I stand in awe. I am always excited to talk about the role chemistry plays in our lives. I hope that I continue working on chemistry and nanotechnology with passion and dedication, in order to help society appreciate nature and to improve our quality of life.
What inspires you about ACN?

ACN is one of the only interdisciplinary research centre’s that offers a collaborative approach between chemist, physicist and biologist. Working with leading researchers would be a real pleasure. Having been working in the industry, I feel that a strong collaboration is essential to solve a complex and interdisciplinary problem. At BASF I had the opportunity to work with business managers, engineers and materials scientists, in order to deliver the best solutions to our customers. Now at ACN I am working on magnetic nanoparticles for drug delivery and magnetic resonance imaging, which definitely requires contributions from polymer chemists, materials scientist, biomedical engineers and molecular biologists. Through its platforms at UNSW and international conference ACN offers an interdisciplinary network between scientists.

At which upcoming conferences are you presenting in 2013?

I have submitted my abstract to the 34th Australasian Polymer Conference in Darwin (July 2013) and the 15th Asian Chemical Congress in Singapore (August 2013). ACN, as the host of the 4th International Nanomedicine Conference in Sydney (July 2013), ACN opens the opportunity to present my work as well.

How do you spend your spare time?

I love to spend time with my family, walking in nature, playing music and exploring new foods.

Which profession would you choose if you were not a scientist?

Probably I would have become a nature photography or explorer. Trying to combine nature and technology by capturing a glimpse of nature’s beauty into a camera and make other peoples inspired about it.