

Citation for YRA 2013 - Dr Barbaros Özyilmaz

Assistant Professor and NRF Fellow Barbaros Özyilmaz is among the pioneers of graphene research. He set up the first graphene lab at NUS and his work has helped to put NUS and Singapore on the world map for graphene research. Since 2008 Barbaros has co-authored 33 papers; with nearly 5000 citations he is among the most cited scientists in this field.

Barbaros' research work is highly competitive, and has attracted numerous grants including the NRF Competitive Research Program grant and a grant from the US Office of Naval Research to NUS. He is a key founding member of the NUS Graphene Centre.

His research is highly creative and interdisciplinary. It addresses both fundamental questions as well as the potential applications of graphene. In collaboration with Samsung and Sungkyunkwan University (SKKU) in Korea, he was first to demonstrate the large scale manufacturing of industrial scale graphene (published in *Nature Nanotechnology*). He has also studied the potential of graphene for non-volatile memory, magnetic data storage and magnetic data

processing (published in *Nature Physics*), and was first to demonstrate graphene's potential for stem cell therapies and tissue engineering. With more than 12 patent applications, he has developed a strong IP portfolio for NUS and is actively pursuing the commercialization of graphene technologies.

As a globally recognized leader in his field, Barbaros has given more than 40 invited talks at international conferences and is closely working with industry leaders in developing novel applications for graphene.

For his research accomplishments, Barbaros received the NRF Fellowship Award in 2008, University Young Investigator Award in 2010, the Singapore Millennium Foundation Research Horizons Award in 2010, and the Science Faculty Young Scientist Award in 2012.