

BIOGRAPHICAL SKETCH

Yoke Khin Yap, Ph.D.

Professor of Physics, Adjunct Professor of Materials Science and Engineering
Director, Graduate Program in Applied Physics
Michigan Tech University Professor
<https://www.mtu.edu/physics/department/faculty/yap/>

Department of Physics
Michigan Technological University
118 Fisher Hall, 1400 Townsend Drive
Houghton, MI 49931-1295, USA

Phone: (906) 487 2900
Fax: (906) 487 2933
Email: ykyap@mtu.edu
<http://phy.sites.mtu.edu/yap/>

A. PROFESSIONAL PREPARATION:

University of Malaya (Kuala Lumpur, Malaysia), Physics	<i>B.Sc. (Hon)</i> 1992
University of Malaya (Kuala Lumpur, Malaysia), Physics	<i>M.Sc.</i> 1994
Osaka University (Osaka, Japan), Electrical Engineering	<i>Ph.D.</i> 1999
New Energy Industrial Tech Development Org./Osaka Univ.	<i>Scientist</i> (1999-2000)
The Japan Society for the Promotion of Science/Osaka Univ.	<i>JSPS Fellow</i> (2000-2002)

B. APPOINTMENTS:

Distinguish Professor	Michigan Technological University (Since January 2020)
Professor	Michigan Technological University (Since August 2011)
Associate Professor	Michigan Technological University (August 2006-August 2011)
Assistant Professor	Michigan Technological University (January 2002-August 2006)

C. Selected Publication:

1. J-K. Qin, P-Y. Liao, M. Si, S. Gao, G. Qiu, J. Jian, Q. Wang, S-Q. Zhang, S. Huang, A. Charnas, Y. Wang, M. Kim, W. Wu, X. Xu, H. Wang, L. Yang, Y. K. Yap, and P. Ye, "[Raman Response and Transport Properties of One-Dimensional van der Waals Tellurium Atomic Chains in Nanotubes](#)" *Nature Electronics* **3** 141-147 (2020). News coverage from [Materials Today](#), AAAS ([EurekAlert!](#), [EurekAlert-2](#), [EurekAlert-3](#)), [PhysOrg](#). [Altmetric Attention Score in the 99th percentile.](#)
2. S. Bhandari, B. Hao, K. Waters, C. H. Lee, J-C. Idrobo, D. Zhang, R. Pandey, Y. K. Yap, "[Two-Dimensional Gold Quantum Dots with Tunable Bandgaps](#)," *ACS Nano* **13**, 4347 (2019). News from [Physorg](#), [EurekAlert!](#), [Nanowerk](#), [Electropages](#), [IntelligentThings](#), etc.
3. (Frontier Review) C. H. Lee, B. Tiwari, D. Zhang, Y. K. Yap, "[Water Purification: Oil-water Separation by Nanotechnology and Environmental Concerns](#)," *Environ. Sci.: Nano* **2017**, **4**, 514-525. [Environmental Science: Nano 2017 Most Downloaded Article.](#)
4. (Review) M. Ye, D. Winslow, D. Zhang, R. Pandey, Y. K. Yap, "[Recent Advancement on the Optical Properties of Two-Dimensional Molybdenum Disulfide \(MoS₂\) Thin Films](#)," *Photonics* **2015**, **2**(1), 288-307.
5. C. H. Lee, S.Y. Qin, M. A. Savaikar, J. Wang, B. Hao, D. Zhang, D. Banyai, J. A. Jaszczak, K.W. Clark, J.-C. Idrobo, A.-P. Li, Y. K. Yap, "[Room-Temperature Tunneling Behavior of Boron Nitride Nanotubes Functionalized with Gold Quantum Dots](#)," *Advanced Materials* **25**, 2544 (2013). * News Coverage in *Phys Org*, *the Register*, *Science World Report*, *IEEE Spectrum*, and *numerous others*.
6. C. H. Lee, N. Johnson, J. Drelich, Y. K. Yap, "[The performance of superhydrophobic and superoleophilic carbon nanotube meshes in water-oil filtration](#)," *Carbon* **49**, 669 (2011)
7. (Review) Jiasheng Wang, Chee Huei Lee and Yoke Khin Yap, "Recent advancements in boron nitride nanotubes," *Nanoscale* **2**, 2028 (2010).
8. A. Kumar, P. A. Lin, A. Xue, B. Y. Hao, Y. K. Yap, R. M. Sankaran, "[Formation of Nanodiamonds at Near-Ambient Conditions via Microplasmas Dissociation of Ethanol Vapor](#)," *Nature*

Communications 4, Article number: 2618, doi:10.1038/ncomms3618. *News Coverage in [numerous media](#).

9. J. Wang, V. Kayastha, Y. K. Yap, et. al., “[Low temperature growth of boron nitride nanotubes on substrates](#),” *Nano Letters*.5, 2528 (2005). *Unsolicited News Coverage in *Materials Today* Vol. 9 (no 1-2), page 9, Jan-Feb 2006.
10. T. Sasaki, Y. Mori, M. Yoshimura, Y. K. Yap and T. Kamimura, “[Recent development of nonlinear optical borate crystals: key materials for generation of visible and UV light](#),” *Material Science and Engineering R* **30** (2000) 1.

D. SYNERGISTIC ACTIVITIES:

1. The creator and lead organizer of a MRS symposium series: 1) *Symposium MM: Nanotubes and Related Nanostructures* in Spring 2014; 2) *Symposium AA: Carbon Nanotubes, Graphene, and Related Nanostructures* in Fall 2011; 3) *Symposium K: Nanotubes and Related Nanostructures* in Fall 2009; and 3) *Symposium II: Nanotubes and Related Nanostructures*, in Fall 2007. More from the organizer team in 2016, 2018, etc.
2. The editor of four volumes of MRS Proceedings 1) “[Nanotubes and Related Nanostructures—2014](#)” (Vol. 1700), 2) “[Carbon Nanotubes, Graphene and Related Nanostructures](#)” (Vol. 1407), 3) “[Nanotubes and Related Nanostructures -2009](#)” (Vol. 1204), and 4) “[Nanotubes and Related Nanostructures](#)” (Vol. 1057).
3. The editor of a book, “[B-C-N nanotubes and related nanostructures](#)” (Springer 2009). Author of a series of [book and encyclopedia chapters](#).
4. Reviewer of various funding agencies (including NSF, DOE, etc, and the 2015 [DOE BES DMSE Triennial Review of the Oak Ridge National Laboratory projects](#)) and international journals (*Science, Nature Nanotech., Nano Letters, ACS Nano, Advanced Materials, JACS, Chem. Mater., Appl. Phys. Lett.*, etc.)
5. Fellowships and Honors:

2020	Michigan Tech University Professor
2018	MTU Research Award
2015-	Osaka University <i>Global Alumni Fellow</i>
2014-2016	<i>Faculty Fellow</i> in Economy Development and Technology Commercialization, MTU Office of the Vice President for Research
2014-	<i>Member</i> of the MTU Research Advisory Council
2012-	<i>Member</i> of the MTU Graduate Faculty Council
2011	The recipient of the MTU Bhakta Rath Research Award
2010	<i>Task force member and sub-group leader</i> of MRS to provide input to the White House OSTP for the development of a revised Plan for the National Nanotechnology Initiative.
2008-2009	The first elected <i>Chair</i> of the User Group of the DOE Center for Nanophase Materials Sciences (CNMS) at Oak Ridge National Laboratory (ORNL)
2006	<i>US representative</i> to the 2006 NSF US-China Nanotechnology workshop.
2005-	<i>Board member</i> of Osaka University North America Alumni Association
2005-2007	<i>Charter member</i> of the users' executive committee of CNMS at ORNL
2005	NSF Faculty Early Career Development (<i>CAREER</i>) Award
2000-2002	<i>Fellow</i> of the Japan Society for the Promotion of Science (JSPS)
1995-1999	<i>Monbusho Scholar</i> of the Japanese Ministry of Education, Science, Sports, and Culture.