Curriculum Vitae

Name	Tomonari Wakabayashi, Dr.	
Gender	Male	
Date of Birth	1967 May 7	
Nationality	Japan	
Position	Professor	
Affiliation	Department of Chemistry School of Science and Engineering Kindai University	
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Education	1987 – 1991	Bachelor, Tokyo Metropolitan University Faculty of Science, Department of Chemistry
	1991 – 1993	Master in Science, Tokyo Metropolitan University Graduate School of Science, Department of Chemistry
	1993 – 1995	Doctor in Science, Tokyo Metropolitan University Graduate School of Science, Department of Chemistry
Thesis	Title	"Growth and Dynamics of Carbon 5/6 Network Systems"
	Degree	Dr. (Science), Tokyo Metropolitan University, March 1995
	Supervisor	Prof. Yohji Achiba
Appointment	1993 – 1995	JSPS Research Fellowships for Young Scientists (DC1)
	1995 – 2004*	Assistant Professor, Division of Chemistry, Kyoto University
	2004 – 2007	Lecturer, Department of Chemistry, Kindai University
	2007 – 2013	Associate Professor, Department of Chemistry, Kindai University
	2013 – present	Professor, Department of Chemistry, Kindai University

* The period includes experience of European research activity.

	2000 – 2001	Visiting Researcher, Max-Planck-Institut für Kernphysik, MPIK, Heidelberg, Germany, Prof. Wolfgang Krätschmer
Research Field	Physical Chemistry / Molecular Spectroscopy	
Research Interest	Fullerene Growth Mechanism / Carbon-Rich Materials with *sp*-Hybridization / Polyyne Molecules in Space and Laboratories / Raman Spectroscopy / Matrix Isolation Spectroscopy of Reactive Species at Cryogenic Temperatures	

Tomonari Wakabayashi is the author of more than 80 scientific papers in physical chemistry, spectroscopy, and materials science. He is the recipient of Kobe Award in 2002, Japan Society for Molecular Science, and of Osawa Award in 2005, The Fullerenes, Nanotubes and Graphene Research Society. Inspired by the concept of atomic-cluster research in the late 80's, his research interest has been focused on characterization

of carbon molecules with various hybridization schemes, such as linear chains, monocyclic rings, and hollow closed cages, namely fullerenes. Rich abundance of carbon in space has also been a motivation of his research. Molecular structures of interstellar molecules tell us their history of birth, chemical and physical conditions of the place where they are born. There must be a lot of optically silent molecules hidden in space, which can be the next research target to be pursued.

Scientific Papers (Selected)
(See ResearchGate for more details: https://www.researchgate.net/profile/Tomonari_Wakabayashi)

[1] Kouichi Matsumoto, Yu Miyamoto, Kazuaki Shimada, Yusuke Morisawa, Hendrik Zipse, Seiji Suga, Jun Ichi Yoshida, Shigenori Kashimura, Tomonari Wakabayashi, "Low temperature *in situ* Raman spectroscopy of an electro-generated arylbis(arylthio)sulfonium ion", *Chemical Communications*, **51**, 13106-13109 (2015).

[2] Tomonari Wakabayashi, Yoriko Wada, Kyo Nakajima, Yusuke Morisawa, Susumu Kuma, Yuki Miyamoto, Noboru Sasao, Motohiko Yoshimura, Tohru Sato, Kentarou Kawaguchi, "Low-lying electronic states in bismuth trimer Bi_3 as revealed by laser-induced NIR emission spectroscopy in solid Ne", *Journal of Physical Chemistry A*, **119**, 2644-2650 (2015).

[3] Yoriko Wada, Yusuke Morisawa, Tomonari Wakabayashi, "Spectroscopic characterization of a series of polyyne-iodine molecular complexes $H(C{\equiv}C)_nH(I_6)$ of n = 5-9", *Chemical Physics Letters*, 541, 54-59 (2012).

[4] Tomonari Wakabayashi, Mao Saikawa, Yoriko Wada, Toshie Minematsu, "Isotope scrambling in the formation of cyanopolyynes by laser ablation of carbon particles in liquid acetonitrile", *Carbon*, **50**, 47-56 (2012).

[5] Yoriko Wada, Tomonari Wakabayashi, Tatsuhisa Kato, "Photoinduced reaction of hydrogen-end-capped polyynes with iodine molecules", *Journal of Physical Chemistry B*, **115**, 8439-8445 (2011).

[6] Yoshiyasu Kato, Tomonari Wakabayashi, Takamasa Momose, "A mass spectroscopic study of laser vaporized graphite in H_2 and D_2 gases: The stability of $C_{2n}H_2$ and C_{10}", *Chemical Physics Letters*, 386, 279-285 (2004).

[7] Tomonari Wakabayashi, Aik-Loong Ong, Dmitry Strelnikov, Wolfgang Krätschmer, "Flashing carbon on cold surfaces", *Journal of Physical Chemistry B*, **108**, 3686-3690 (2004).

[8] Tomonari Wakabayashi, Daisuke Kasuya, Haruo Shiromaru, Shinzo Suzuki, Koichi Kikuchi, Yohji Achiba, "Towards the selective formation of specific isomers of fullerenes: *T*- and *p*-dependence in the yield of various isomers of fullerenes C_{60}-C_{84}", *Zeitschrift für Physik D - Atoms Molecules and Clusters*, **40**, 414-417 (1997).

[9] Tomonari Wakabayashi, Masamichi Kohno, Yohji Achiba, Haruo Shiromaru, Takamasa Momose, Tadamasa Shida, Koichiro Naemura, Yoshito Tobe, "Photoelectron spectroscopy of C_n^- produced from laser ablated dehydroannulene derivatives having carbon ring size of n = 12, 16, 18, 20, and 24", *Journal of Chemical Physics*, **107**, 4783-4787 (1997).

[10] Tomonari Wakabayashi, Takamasa Momose, Tadamasa Shida, Haruo Shiromaru, Michiaki Ohara, Yohji Achiba, "Preferential formation of C_{10}^- upon tandem irradiation of graphite with IR and UV laser pulses", *Journal of Chemical Physics*, **107**, 1152-1155 (1997).

[11] Tomonari Wakabayashi, Koichi Kikuchi, Shinzo Suzuki, Haruo Shiromaru, Yohji Achiba, "Pressure-controlled selective isomer formation of fullerene C_{78}", *Journal of Physical Chemistry*, **98**, 3090-3091 (1994).

[12] Tomonari Wakabayashi and Yohji Achiba, "A model for the C_{60} and C_{70} growth mechanism", *Chemical Physics Letters*, **190**, 465-468 (1992).