Katsumi Kaneko

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General Information

Title: Distinguished University Professor
Address: Institute for Aqua Regeneration, Interdisciplinary Cluster for Cutting Edge Research, Shinshu University Wakasato 4-17-1, Nagano-shi, Nagano, 380-85553, Japan
Telephone: 81(26) 269 5743, Fax: 81(26) 269 5737
E-mail: kkaneko@shinshu-u.ac.jp
Web: http://www.shinshu-u.ac.jp/faculty/engineering/kaneko-group

Education

B.T. In Applied Chemistry from Yokohama National University, 1969
M.S. In Chemistry(Physical Chemistry) from The University of Tokyo, 1971
Dr. Sci. Faculty of Science, The University of Tokyo, 1977
Dr.Sci. was awarded for research carried out in Chiba University.

Professional Experience

04/1972-07/1992 Assistant professor and associate professor, Chiba University
07/1992-03/2010 Professor, Department of Chemistry, Chiba University
04/2010-present Distinguished professor, Shinshu University

Awards

1998 Award by Carbon Society of Japan
1999 Award by Chemical Society of Japan
2007 Charles Petinos Award by American Carbon Society
2011 Adsorption Society Award by Japan Adsorption Society
2011 Fellow of Chemical Society of Japan
2013 Fellow of Royal Society of Chemistry: FRSC
Fellow of International Adsorption Society
2016 American Institute of Chemical Engineering, Separation Division Award

Selected Publications (more than 540 English papers are published)

1. Ambient pressure storage of high-density methane in nanoporous carbon coated with graphene,S. Wang, F. Vallejos-Burgos, A. Furuse, H. Otsuka, M. Nagae, Y. Kawamata, T. Ohba, H, Kanoh, K. Urita, H. Notohara, I. Moriguchi, H. Tanaka, J. P. Marco-Lozar, J. Silvestre-Albero, T. Hayashi, K. Kaneko, *Nature Energy*, https://doi.org/10.1038/s41560-025-01783-z
2. Giant Nanomechanical Energy Storage Capacity in Twisted Single Wall Carbon Nanotube Ropes, S. Utsumi, S. K. Ujjain, S.Takahashi, R. Shimodomae, T. Yamaura, R. Okuda, R. Kobayashi, O. Takahashi, S. Miyazono, P.Ahuja, A. Furuse, K. Fujisawa,T. Hayashi, N. Kato, K. Aburamoto,Y. Hosoi, D. Tománek, K. Kaneko, *Nature Nanotechnology*, 2024, https://doi.org/10.1038/s41565-024-01645-x
3. Staggerd structural dynamic-mediated selective adsorption of H_2O/D_2O on flexible graphene oxide nanosheets, R. Futamura, T. Iiyama, T. Ueda, P. A. Bonnaud, F. X. Coudert, A. Furuse, H. Tanaka, R. J. -M. Pellenq, K. Kaneko, *Nature Comm.2024, 15* , 3585(1-12).
3. Transient chemical and structural changes in graphene oxide during ripening, H. Otsuka, K. Urita, N. Honma, T. Kimuro, Y. Amako, R. Kukobat, T. J. Bandosz, J. Ukai, I. Moriguchi, K.Kaneko, *Nature Comm*. **2024**, 15, 1708(1-10).
4. How reproducible are surface areas calculated from the BET equation? D. Fairen-Jimenez, K. Kaneko et al. *Adv. Materials*.**2022**, 2022, 34, 2201502(1-12).
5. Ultrapermeable 2D-channeled graphene-wrapped zeolite molecular sieving membranes for hydrogen separation, R. Kukobat, M. Sakai, H. Tanaka, F. Vallejos-

Burgos, C. Lastoskie, M. Matsukata, Y. Sasaki, K. Yoshida, T. Hayashi, K. Kaneko, *Sci. Adv* .**2022**, 8,eabil 3521, 1-11.

7. Separation of oxygen isotopes in subnanometer carbon pores, S. K. Ujjain, A. Baguestty, Y. Matsuda, H. Tanaka, R. Ahuja, C. De. Tomas, M. Sakai, F.Vallejos-Burogos, R. Futamura, I. Suarez-Martines, M. Matsukata, A. Kodama, G. Garveroglio, Y. Gogots, .J. K. Johonson, K. Kaneko, *Nature Comm.* **2021,** 12:546:1-10. doi.org/10.1038/s41467-020-20744-6
8. MOF materials as therapeutic agents, drug carriers, imaging agents and biosensors in cancer biomedicine: recent advances and perspectives, A. Bieniek, A. P. Terzyk, M. Wisniewski, K. Roszeki, P. Kowalczyk, L Sakisov, S. Keskin, K. Kaneko, *Progress in Materials Scienc***e**, **2021**, 117, 100743:1-90. Review IF=31.6
9. Nanoporous Materials for Gas Storage, Book K. Kaneko and F. Rodriguez-Reinoso editors, Springer, 403 pages, April (2019).
10. Air separation with graphene mediated nanowindow-rim concerted motion, F. Vallejos-Burgos, F.-X. Coudert, K. Kaneko, *Nature Comm*. **2018**, 9, 1812-1821.
11. Partial breaking of the Coulombic ordering of ionic liquids confined in carbon nanopores, R. Futamura, T. Iiyama, Y. Takasaki, Y. Gogotsi, M. J. Biggs, M. Salanne, J. Ségalini, P. Simon, K.Kaneko, *Nature Mater*. **2017**, 16, 1163-1273.
12. Efficient storage mechanisms for building better supercapacitors ,M. Salanne B. Rotenberg, K. Naoi, K. Kaneko, P.-L. Taberna, C. P. Grey, B. Dunn, P. Simon, *Nature Energy*, **2016**, 1, Article number: 16070. doi:10.1038/nenergy.2016.7
13. Methane hydrate formation in confined nanospace can surpass nature, M. E. Casco, J. Silvestre-Albero, A. J. Ramırez-Cuesta, F. Rey, J. L. Jorda, A. Bansode, A. Urakawa, I. Pera, M. Martinez-Escandel, K. Kaneko, F. Rodrıguez-Reinoso, *Nature Comm*., **2015**, 6, 6432-6440.
14. Graphitic nanopores: Water capture in carbon cuboids, K. Kaneko, *Nature Chem*. **2015**, 7 , 194-196.
15. Conducting linear chains of sulphur inside carbon nanotubes, T. Fujimori, A. Morelos-Gomez, Z. Zhu, H. Muramatsu, R. Futamura, K. Urita, M. Terrones, T. Hayashi, M. Endo, S. Y. Hong, Y. C. Choi, D. Tomanek, K. Kaneko, *Nature Comm.* **2013**, 4, 2162-2169.
16. Mesopore-added zeolites: An overview of their preparation, characterization and evaluation of the application, Y. Tao, H, Kanoh, A. Lloyd, K. Kaneko, *Chem. Review*. **106**, 896-910 (2006).