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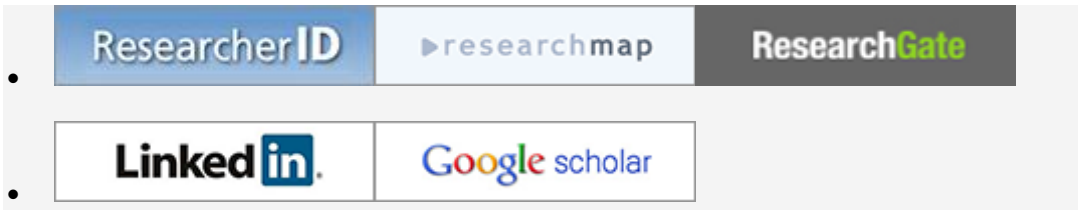
略歴

2005 年 West Vancouver Secondary School 卒業、2009 年 Queen’s University 卒業（Physics）、2010 年 University of Toronto 修士課程修了（Physics）、2018 年 University of Toronto 博士課程修了見込（Materials Science & Engineering）、2018 年 北海道大学電子科学研究所 助教、現在に至る。



原著論文 (39)

[39] Xi Zhang#, Yuqiao Zhang#*, Liao Wu, Akihiro Tsuruta, Masashi Mikami, **Hai Jun Cho**, and Hiromichi Ohta*, "$Ba_{1/3}CoO_2$: A Thermoelectric Oxide Showing a Reliable *ZT* of ~0.55 at 600 °C in Air", ***ACS Appl. Mater. Interfaces*** 14, 33355 (2022). (July 12, 2022) (DOI: 10.1021/acsami.2c08555) **Press release**

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[27] Doudou Liang*, Bin-jie Chen, Bin Feng, Yuichi Ikuhara, **Hai Jun Cho**, and Hiromichi Ohta*, "Optimization of Two-Dimensional Channel Thickness in Nanometer-Thick SnO_2-Based Top-Gated Thin-Film Transistors using Electric Field Thermopower Modulation: Implications for Flat-Panel Displays", *ACS Appl. Nano Mater.* 3, 12427-12432 (2020). (December 15, 2020) (DOI: 10.1021/acsanm.0c03069)

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[23] Ichiro Terasaki, Isuzu Sano, Kosuke Toda, Shuji Kawasaki, Akitoshi Nakano, Hiroki Taniguchi, **Hai Jun Cho**, Hiromichi Ohta, and Fumihiko Nakamura, "Non-equilibrium steady states in the Mott insulator Ca_2RuO_4", *J. Phys. Soc. Jpn.* **89**, 093707 (2020). (August 27th, 2020) (DOI: 10.7566/JPSJ.89.093707)

[22] Fabian Krahl, Yuzhang Wu, **Hai Jun Cho***, Maarit Karppinen, and Hiromichi Ohta*, "Spontaneous generation of carrier electrons at the interface between polycrystalline ZnO and amorphous $InGaZnO_4$", *Adv. Electron. Mater.* **6**, 2000404 (2020). (September 11, 2020) (DOI: 10.1002/aelm.202000404)

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[13] Qian Yang, **Hai Jun Cho**, Hyoungjeen Jeen*, and Hiromichi Ohta*, "Macroscopic Visualization of Fast Electrochemical Reaction of SrCoOx Oxygen Sponge", *Adv. Mater. Interfaces* **6**, 1901260 (2019). (DOI: 10.1002/admi.201901260) (October 23, 2019) **Outside Back Cover** **Press release**

[12] **Hai Jun Cho***, Bin Feng, Takaki Onozato, Mian Wei, Anup Sanchela, Yuichi Ikuhara, and Hiromichi Ohta*, "Investigation of electrical and thermal transport property reductions in La-doped $BaSnO_3$ films", *Phys. Rev. Materials* **3**, 094601 (2019). (September 3rd, 2019) (DOI: 10.1103/PhysRevMaterials.3.094601) **Editors' Suggestion**

[11] Yuqiao Zhang*, Kenyu Sugo, **Hai Jun Cho**, and Hiromichi Ohta*, "Thermoelectric Phase Diagram of the $SrTiO_3$ – $LaTiO_3$ Solid-Solution System through a Metal to Mott Insulator Transition", *J. Appl. Phys.* **126**, 075104 (2019). (August 15th, 2019) (DOI: 10.1063/1.5100993)

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[9] Anup Sanchela*, Mian Wei, Joonhyuk Lee, Gowoon Kim, Hyoungjeen Jeen, Bin Feng, Yuichi Ikuhara, **Hai Jun Cho**, Hiromichi Ohta*, "Buffer layer-less fabrication of high-mobility transparent oxide semiconductor, La-doped $BaSnO_3$", *Journal of Materials Chemistry C* **7**, 5797-5802 (2019). (DOI: 10.1039/C8TC06177G)

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招待講演（2）

[2] **Hai Jun Cho**, Hiromichi Ohta, “Utilization of anisotropic materials in thermal management technologies”, International Conference on Condensed Matter and Device Physics – 2021, 2021.9.9-11 (Invited)

[1] **Hai Jun Cho**, “Observation of coherent thermal conduction across natural superlattices”, International mini-workshop on Nonequilibrium transport and phase transition in novel materials, Nagoya Univ., Nagoya, 26th November, 2018 (Invited)

学会発表（14）

[14] **H.J. Cho**, Y. Wu, Y. Zhang, B. Feng, M. Mikami, W. Shin, Y. Ikuhara, Y-M. Sheu, K. Saito, H. Ohta, “Anomalously low heat conduction in single-crystal superlattice ceramics lower than randomly oriented polycrystals”, 1st Japan-France Virtual Workshop on Thermoelectrics (VWT2021), online, 2021.9.27-30. **Oral presentation award**

[13] **H.J. Cho**, Y. Wu, J. Qi, Y. Kim, H. Ohta, O. Matsuda, “Acoustic Vibrational Wave Transmissions at Metal-Superlattice Interfaces”, 第 82 回 応用物理学会秋季学術講演会, online, 2021.9.10-13.

[12] **Hai Jun Cho**, Bin Feng, Takaki Onozato, Mian Wei, Anup V. Sanchela, Yuichi Ikuhara, and Hiromichi Ohta, “Investigation of transport property reductions in epitaxial La-doped $BaSnO_3$ films”, The 3rd Workshop on Functional Materials Science, Sapporo, Japan, December 18th-20th, 2019. (Oral)

[11] **H.J. Cho**, G. Kim, T. Onozato, H. Jeen, and H. Ohta, “Characterization of thermal conductivity tensors using time-domain thermoreflectance”, The 3rd Workshop on Functional Materials Science, Sapporo, Japan, December 18th-20th, 2019. (Poster)

[10] **Hai Jun Cho**, Bin Feng, Takaki Onozato, Mian Wei, Anup V. Sanchela, Yuichi Ikuhara, Hiromichi Ohta, “Electron and heat transport properties of La-doped $BaSnO_3$ epitaxial films”, 26th International Workshop on Oxide Electronics (iWOE26), Kyoto, Japan, Sep. 29 – Oct. 2, 2019. (Oral)

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[8] **Hai Jun Cho**, Hiromichi Ohta, “Time-domain thermoreflectance: A powerful tool for the thermal conductivity measurement of thin films”, The 19th RIES-HOKUDAI International Symposium 組[So], Jozankei View Hotel, Sapporo, December 11th-12th, 2018 (Poster)

[7] **H.J. Cho**, M. Wei, A. Sanchela, and H. Ohta, “Effect of dopants on the thermal stability of oxygen in $BaSnO_3$ and engineering of electronic transport properties”, The 2nd Workshop on Functional Materials Science, Busan, South Korea, October 22-23, 2018

[6] **Hai Jun Cho**, Wei Mian, Feng Bin, Anup V. Sanchela, Yuichi Ikuhara, Hiromichi Ohta, “Investigation of the Electron Mobility in La-doped $BaSnO_3$ films using Time-Domain Thermoreflectance (TDTR) Method”, 2018 年 第 79 回 応用物理学会秋季学術講演会, 名古屋国際会議場（名古屋･愛知）, 2018 年 9 月 18 日-21 日

[5] **H. Cho**, J. Tam, M. Kovylina, Y-J. Kim, U. Erb, “Thermal conductivity of bulk nanocrystalline-nickel diamond composite materials produced by electrodeposition”, Integran Technologies, Toronto, June 2016.

[4] **H. Cho**, J. Tam, M. Kovylina, Y-J Kim, U. Erb, “Thermal conductivity of bulk nanocrystalline-nickel diamond composite materials produced by electrodeposition”, Canadian Materials Science Conference, Hamilton, June 2016.

[3] **H. Cho**, M. Kovylina, U. Erb, “Thermal conductivity of nickel-diamond composites produced by electrodeposition”, Canadian Materials Science Conference, Halifax, June 2015.

[2] **H. Cho**, “Transport properties: Thermal conductivity”, Amazon Lab 126, Toronto, Oct 2014.

[1] **H. Cho**, “Transport properties: Thermal conductivity, Royal Canadian Mint”, Toronto, Aug 2014.

受賞（7）

[7] **Hai Jun Cho**, **Oral presentation award**, H.J. Cho, Y. Wu, Y. Zhang, B. Feng, M. Mikami, W. Shin, Y. Ikuhara, Y-M. Sheu, K. Saito, H. Ohta, “Anomalously low heat conduction in single-crystal superlattice ceramics lower than randomly oriented polycrystals”, 1st Japan-France Virtual Workshop on Thermoelectrics (VWT2021), online, 2021.9.27-30.

[6] 第 48 回電子科学研究所 松本･羽鳥奨学賞（2019.2.22） **賞状**

[5] Second place for materials physics presentation, Canadian Materials Science Conference, Hamilton 2016

[4] Impact Teaching Assistance of the Year Award, University of Toronto 2014

[3] NSERC USRA Award, Queen's University 2007 Summer

[2] Lounden Scholarship in Physics, Queen's University 2006

[1] Dean's List Awards, Queen's University 2005 – 2008

特許 (1)

[1] 太田裕道, 楊 倩, ジョ ヘジュン, 特願 2021-164181, 2021 年 10 月 5 日 出願

報道 (73)

[73] 日刊工業新聞, "酸化物系熱電変換材、600℃で安定動作　北大・産総研が開発" (2022.07.13)

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