

## **List of recent invited talks by Prof. H. Kamimura**

### **since the beginning of the 21<sup>st</sup> century**

- 1) Theory of high temperature superconductivity – From electronic structures to d-wave pairing, Invited talk at Third International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials, Honolulu, Hawaii, USA, January 15 -19, 2001
- 2) Theoretical study on anomalous behavior of photoluminescence in type II superlattices in strong magnetic fields, Invited talk at 110 Years Nobel Physics – Quantum Hall Effect and Heterostructures, Würzburg, Germany, December 10 – 15, 2001
- 3) A novel approach to the metallic state of cuprates, Invited talk at International Conference on Local and Nanoscale Structure in Composite Systems, Santa Fe, New Mexico, USA, January 27 – February 1, 2002
- 4) A Novel approach to the polaronic metallic state of cuprates and the d-wave pairing mechanism, Invited talk at International Conference on Superconductivity, CMR & Related Materials, Giens, France, June 1 – 8, 2002
- 5) Past, Present and Future in the Scientific Cooperation between Tokyo University of Science and Université Louis Pasteur, Summary talk at the Tokyo University of Science - Université Louis Pasteur Symposium 2003: “Materials and Life Sciences”, 東京理科大学・神楽坂キャンパス、東京、June 5-6, 2003
- 6) Theory of Copper Oxide Superconductors, (特別講演)、日本物理学会北海道支部、北海道大学、札幌、 June 11, 2003
- 7) Study on the Mechanism of Proton Conduction in Zero-dimensional Hydrogen-Bonded Crystals, Invited talk at 10-th Hopping and Related Phenomena Conference, International Centre for Theoretical Physics, Trieste, Italy, September 1 - 4, 2003
- 8) Theory of Copper Oxide Superconductors, (特別講演)、京都大学院物理学専攻、京都、 November 11, 2003
- 9) The role of Proton Hopping in the insulator-superionic conductor transition in the hydrogen-bonded systems, invited talk at International Conference on Dynamical Energy Landscapes in Functional Systems II, Santa Fe, New Mexico, USA, March 28-April 1, 2004
- 10) D-wave pairing mechanism due to the interplay of electron-phonon interaction and antiferromagnetic ordering, Invited talk at the Satellite Meeting on Cuprates, Santa Fe, New Mexico, USA, April 2-3, 2004
- 11) Theory of superionic conduction in hydrogen-bonded systems, Invited talk at 11-th Workshop on Advanced Heterostructure, Hapuna Beach Prince Hotel, Kohala Coast, Hawaii, USA, December 5-10, 2004
- 12) Novel Approach to the Metallic State of Superconducting Cuprates and d-Wave Pairing Mechanism, Invited talk at Special Symposium on Theoretical and Experimental Condensed Matter Sciences, Dept. of Physics, University of California at Berkeley, USA, March 26, 2005

- 13) Mechanism of Superionic Conduction in Hydrogen-Bonded Materials, (特別講演) at Colloquium for Computational Materials- and Life-Science, 筑波大学、つくば、February 18, 2005
- 14) Mechanism of Superionic Conduction in Hydrogen-Bonded Materials (特別講演)、理研、和光、April 28, 2005
- 15) Theory of Superionic Conduction in Hydrogen-bonded Systems, Lecture in Ioffe Institute, St. Petersburg, Russia, June 24, 2005
- 16) Theory of Impurity Bands in Doped Semiconductors, Lecture in Ioffe Institute, St. Petersburg, Russia, June 27, 2005
- 17) Theory of Copper Oxide Superconductors, Lecture in Ioffe Institute, St. Petersburg, Russia, June 28, 2005
- 18) 物性物理における高速計算の役割と期待、基調講演、ハイエンド・バンド計算セミナー (主催: NEC HPC販売促進本部)、芝パークホテル、東京、July 20, 2005
- 19) Ferroelasticity and the proton-induced superionic conduction: Theory, シンポジウム講演、超イオン伝導、日本物理学会2005秋季大会、同志社大学・京都田辺キャンパス、September 21, 2005
- 20) Theory of Copper Oxide Superconductor, invited talk at International Workshop on “Electron State and Lattice Effects in Cuprate High Temperature Superconductors, 産総研、筑波、October 27-28, 2005
- 21) 銅酸化物高温超伝導の理論 (特別講演)  
大阪大学 21 世紀 COE 講演会、基礎工学部、豊中、September 16, 2006
- 22) Theory of Copper Oxide Superconductors, Special Lecture at Max Planck Institute for Solid State Physics, Stuttgart, Germany, March 31, 2006
- 23) Anti-Jahn-Teller Effect and D-Wave Phonon Mechanism, Invited talk at American Physical Society (APS) 2007 March Meeting, Denver, USA, March 5-9, 2007
- 24) Anti-Jahn-Teller Effect and D-Wave Phonon Mechanism, Invited talk at International Conference on Quantum Information to Bio-Informatics, 東京理科大・野田キャンパス、March 14 – 17, 2007
- 25) Anti-Jahn-Teller Effect and D-Wave Phonon Mechanism シンポジウム講演、日本物理学会 2007 年春季大会・高温超伝導シンポジウム、鹿児島大学、March 18 -21, 2007
- 26) Interplay of Mott Physics and Jahn-Teller Physics, Invited talk at International Conference on Dynamic Energy Landscapes in Functional Systems III, Port Jefferson, New York, USA, May 22 – 26, 2007
- 27) On the important role of interplay between Jahn-Teller Physics and Mott Physics, Invited talk at International Symposium on Lattice Effects in Cuprate High Temperature Superconductors, National Institute of Advanced Industrial Science and Technology (AIST, 産総研), October 30 – November 3, 2007
- 28) Theory of proton-induced superionic conduction in hydrogen-bonded systems, (招待講演)  
At the 2008 International Conference on Quantum-Bio Informatics, 東京理科大・野田キャンパス、March 12 -16, 2008
- 29) 銅酸化物高温超伝導体の理論 ~モット物理とヤーン・テラー物理の観点から~ (特別講演)、特定領域研究 (配列ナノ空間を利用した新物質科学-ユビキタス元素戦略-) 大阪大学理学系研究科講堂、豊中、June 6 – 8, 2008

- 30) A New Phase Diagram for Fermi Surface and Superconductivity in High T<sub>c</sub> Superconductors, Invited talk at Symposium on Frontiers in Condensed Matter Physics & Nanoscience, Department of Physics, University of California at Berkeley, USA, March 21-22, 2009
- 31) Final Remarks at the Satellite Meeting, Concluding talk at Satellite Meeting on New Materials Science using Regulated Nano-Spaces- Strategy ins Ubiquitous Elements, Tsinghua University, Beijing, May 14 -15, 2009
- 32) From Impurity Bands to High Temperature Superconductivity, Plenary talk at International Symposium on Advanced Nanodevices and Nanotechnology, Kanapali, Maui, USA, November 29 – December 4, 2009
- 33) Coherent proton-induced conduction in the excited state of hydrogen-bonded materials exhibiting a metal-insulator transition, 30<sup>th</sup> International Conference on Physics of Semiconductors, Oral Session of Novel Materials [MoE2-2] on 26 July 2010, Coex Conference Center, Seoul, Korea
- 34) 「スピン物性からみた不純物伝導と高温超伝導」、飯綱・サイエンスサマー道場 「材料の世界を一変させるスピン物性の新展開」 (長野県飯綱高原 ホテルアルカディア 2011年8月17-19日)
- 35) Occurrence of Fermi Pockets without Pseudogap Hypothesis and Clarification of ARPES Spectra in Underdoped Cuprate Superconductors, invited talk at the Symposium M on “Recent Progress in New Superconductors and Related Multifunctional Materilas” in E-MRS Fall-Meeting, 19 September 2011, Technical University of Warsaw, Warsaw, Poland
- 36) Occurrence of Fermi Pockets without Pseudogap Hypothesis and Clarification of ARPES Spectra in Underdoped Cuprate Superconductors, Tutorial Seminar at Prof. John Cooper, Quantum Matter Group, Cavendish Laboratory, University of Cambridge, 26 September 2011, Cambridge, UK