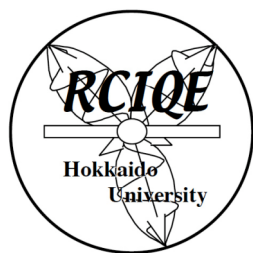


# 2008 RCIQE International Seminar on "Advanced Semiconductor Materials and Devices"



**March 3-4, 2008**  
**Conference Hall, Hokkaido University**

Co-Sponsored by  
*Research Center for Integrated Quantum Electronics (RCIQE)*  
and  
*Global COE Program of*  
*Center for Next-Generation Information Technology based on*  
*Knowledge Discovery and Knowledge Federation,*  
*Hokkaido University*

## Program

### (Monday, March 3)

- 10:00 - 10:10 "Opening Address"  
*T. Fukui, Hokkaido University*
- **Growth and Formation of Nanostructures I-**
- 10:10 - 10:50 "Ultraviolet to red emission of InGaN/AlGaIn nanocolumn LEDs and related nanocolumn growth technology"  
*K. Kishino, Sophia University*
- 10:50-11:20 "InP/InAs core-multishell heterostructure nanowires grown by metalorganic vapor phase epitaxy"  
*T. Fukui, Hokkaido University*
- 11:20-11:50 "Datta-Das-type spin field-effect transistor operation in the non-ballistic regime"  
*K. Yoh, Hokkaido University*
- 11:50-13:20 Lunch Break
- **Growth and Formation of Nanostructures II-**
- 13:20-14:00 "Metal-induced crystallization of Si for nano-structure formation"  
*T. Asano, Kyushu University*
- 14:00-14:40 "Growth, optical and electrical properties of III-V semiconductor nanowires "  
*G. Zhang, NTT Basic Research Laboratories*
- 14:40-15:00 Coffee Break
- **Physics and Device Application of Nanostructures -**
- 15:00-15:40 "THz photon assisted tunneling in carbon nanotube quantum dots"  
*K. Ishibashi, T. Fuse, Y. Kawano, S. Toyokawa and T. Yamaguchi, RIKEN*
- 15:40-16:00 "GaAs-nanowire-network-based functional devices for information processing"  
*S. Kasai, Hokkaido University and JST-PRESTO*
- 16:00-17:30 **Poster Viewing Session**
- 17:30-18:00 **Lab Tour to RCIQE**
- 18:00-19:30 **Reception (Centennial Hall, Hokkaido Univ.)**

### (Tuesday, March 4)

- **Advanced Optoelectronic and Electronic Devices -**
- 9:20-10:00 "Development of high-performance ZnO heterostructure FETs and their applications"  
*S. Sasa, K. Koike, M. Yano, T. Maemoto, and M. Inoue, Osaka Institute of Technology*
- 10:00-10:40 "Terahertz detectors and emitters based on plasma wave oscillations in nanometer size structures"  
*W. Knap, CNRS, France*
- 10:40-11:00 Coffee Break
- 11:00-11:40 "Novel phase-change memory devices and their integration technology"  
*B.-G. Yu and S.-M. Yoon, Electronics and Telecommunications Research Institute, Korea*
- 11:40-12:00 "Mesa-gate AlGaIn/GaN HEMTs with nano-size channels"  
*T. Hashizume and T. Tamura, Hokkaido University*
- 12:00-13:30 Lunch Break
- **Spintronic Materials and Devices -**
- 13:30-14:10 "Spintronics materials and devices for advanced electronics"  
*M. Tanaka, The University of Tokyo*
- 14:10-14:50 "Heusler alloy-based fully epitaxial magnetic tunnel junctions with a MgO tunnel barrier"  
*M. Yamamoto, T. Uemura and K. Matsuda, Hokkaido University*
- 14:50-15:10 "Selective-area formation of ferromagnetic MnAs/GaAs nanoclusters by MOVPE"  
*S. Hara, Hokkaido University and JST-PRESTO*
- 15:10-15:20 "Closing Remarks"  
*E. Sano, Hokkaido University*

Registration fee: free, Reception fee: 1000 yen

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