

**RIEC/AIMR Special Seminar**  
**October 15 (Wed), 2014, 10:30-11:30,**  
**AIMR Seminar Room at Main Building**

**Center for Integrated Quantum Materials**

Professor Robert M. Westervelt  
School of Engineering and Applied Sciences  
Harvard University

abstract:

The new NSF Science and Technology Center joins Harvard, Howard Univ, MIT, the Museum of Science, and College Network schools. Our mission is to create new types of electronics and photonics with quantum materials: Atomic Layers - graphene, BN and MoS<sub>2</sub>, for atomic-scale devices; Topological Insulators for protected data channels, and Nitrogen Vacancy Centers in Diamond for atomic memory sites.

Professor Robert Westervelt received his Ph.D. from UC Berkeley in 1977. Following a postdoctoral appointment he moved to Harvard, where he is currently Mallinckrodt Professor of Applied Physics and Physics. Westervelt's group builds liquid-He cooled scanning probe microscopes to image the motion of electrons through nanostructures. For biomedicine, his group develops programmable Integrated Circuit / Microfluidic chips. Westervelt is Director of the STC Center for Integrated Quantum Materials. In addition, he is Director of the Harvard Center for Nanoscale Systems, which provides advanced shared facilities for nanofabrication, analysis, and electron microscopy.

[Contact] Yasushi SAKANAKA  
Specially Appointed Professor  
Office for the Promotion of International Relations  
RIEC, Tohoku-University  
TEL: +81-22-217-5534  
Email: [y.sakanaka@riec.tohoku.ac.jp](mailto:y.sakanaka@riec.tohoku.ac.jp)