1. Journals

Carbon Alloy Catalysts: Active Sites for Oxygen Reduction Reaction
IKEDA Takashi, BOERO Mauro, HUANG Sheng-Feng, TERAKURA Kiyoyuki, OSHIMA Masaharu, and OZAKI Jun-ichi

Exact diagonalization study on nonmagnetic impurity effects in high-Tc superconductors
TSUTSUI Kenji, TOYAMA Atsushi, TOHYAMA Takami, MAEKAWA Sadamichi

Momentum-resolved charge excitations in high-Tc cuprates studied by resonant inelastic X-ray scattering

Possible Collective Spin Excitation in the Spin-Triplet Superconducting State of Sr2RuO4: Multi-Band Theory
T. Nomura, D. S. Hirashima and K. Yamada

Analysis of Incident-Photon-Energy and Polarization Dependent Resonant Inelastic X-ray Scattering from La2CuO4
M. Takahashi, J. Igarashi and T. Nomura

Theory of magnetic properties in the spin-triplet superconducting state of Sr2RuO4
T. Nomura, H. Ikeda and D. S. Hirashima

Possibility of Unconventional Pairing Due to Coulomb Interaction in Fe-Based Pnictide
Superconductors: Perturbative Analysis of Multi-Band Hubbard Models
T. Nomura

Possible Mechanism of Charge Stripe Formation Based on the Ring Exchange Interaction
T. Sakai

Quantum phase transitions of the asymmetric three-leg spin tube

Numerical Diagonalization Study on a Phonon-assisted Hole Pairing Mechanism of an Extended t-J Holstein Model
T. Sakai

X-ray absorption analysis of nitrogen contribution to oxygen reduction in carbon alloy cathode catalysts for polymer electrolyte fuel cells
NIWA Hideharu, HORIBA Koji, HARADA Yoshihisa, OSHIMA Masaharu, IKEDA Takashi, TERAKURA Kiyoyuki, OZAKI Jun-ichi, and MIYATA Seizo

First-principles calculation of the electronic properties of doped nitrogen and boron in a graphene cluster: analysis of catalytic activity for oxygen reduction reaction
HUANG Sheng-Feng, TERAKURA Kiyuyuki, OZAKI Taisuke, IKEDA Takashi, BOERO Mauro, OSHIMA Masaharu, OZAKI Jun-ichi, and MIYATA Seizo

Exact Diagonalization Calculations of Hole Binding around Ni Impurities in Ni-substituted Cuprate Superconductors
TSUTSUI Kenji, TOYAMA Atsushi, TOHYAMA Takami, MAEKAWA Sadamichi

Perturbation Theory of High-Tc Superconductivity in Iron Pnictides
T. Nomura
Field-Induced Incommensurate Order and Possible Supersolid in the S=1/2 Frustrated Diamond Chain
T. Sakai, K. Okamoto and T. Tonegawa

Ground-State Phase Diagram of an (S, S’)=(1, 2) Spin-Alternating Chain with Competing Single-Ion Anisotropies
T. Tonegawa, T. Sakai, K. Okamoto and M. Kaburagi

Two-step quantum spin flop transition in spin ladders
T. Sakai, T. Tonegawa and K. Okamoto

Polarization Plateau in Atomic Fermi Gas Loaded on Triangular Optical Lattice
M. Okumura, S. Yamada, M. Machida and T. Sakai

Dzyaloshinsky-Moriya Interaction in the S=1/2 Quasi-One-Dimensional Antiferromagnet Cu2Cl4H8C4SO2 as Determined via High-Frequency ESR

Magnetic Field versus Temperature Phase Diagram of the Spin-1/2 Alternating-Bond Chain Compound F5PNN

Elementary excitations and spin dynamics in nanowire quantum magnets
T. Sakai, T. Tonegawa and K. Okamoto
Int. J. Mod. Phys. C 20 ,1467-1476 (2009)

Quantum Phase Transition of a Triangular Lattice Spin Tube and Edge Spin Effects
K. Okunishi, S. Yoshikawa, T. Sakai and S. Miyashita
Int. J. Mod. Phys. C 20, 1423-143 (2009)

Structure of liquid water under high pressure up to 17 GPa
KATAYAMA Yoshinori, HATTORI Takanori, SAITO Hiroyuki, IKEDA Takashi, AOKI Katsutoshi, FUKUI Hiroshi, and FUNAKOSHI Kenichi

High-temperature water under pressure
IKEDA Takashi, KATAYAMA Yoshinori, SAITO Hiroyuki, and AOKI Katsutoshi

Enhanced Catalytic Activity of Carbon Alloy Catalysts Codoped with Boron and Nitrogen for Oxygen Reduction Reaction
IKEDA Takashi, BOERO Mauro, HUANG Sheng-Feng, TERAKURA Kiyuyuki, OSHIMA Masaharu, OZAKI Jun-ichi, and MIYATA Seizo

Field Induced Exotic Phenomena of the S=1/2 Three-Leg Quantum Spin Nanotube
T. Sakai, K. Okunishi, K. Okamoto, C. Itoi and M. Sato

Magnetization Process of the S=1/2 Distorted Diamond Spin Chain with the Dzyaloshinsky-Moriya interaction
T. Sakai, T. Tonegawa and K. Okamoto

Half Magnetization Plateau of a Frustrated S=1 Antiferromagnetic Chain
T. Tonegawa, H. Nakano, T. Sakai, K. Okamoto, K. Okunishi and K. Nomura

Field-Induced Nematic Phase in the Spin Ladder System with Easy-Axis Anisotropy
T. Sakai, T. Tonegawa and K. Okamoto

First-Order Phase Transition between One-Third Magnetization Plateau States in an Anisotropic (S, S') Spin Alternating Chain
2. Others

Hydration and Chemical Reactions of Metal Ions via First Principles Molecular Dynamics Method
IKEDA Takashi

Present Status and Future Subjects of First-Principles-Based Simulations for Chemical Reactions
IKEDA Takashi, BOERO Mauro, and MORIKAWA Yoshitada
BUTSURI 64 (2009) 256-262 (in Japanese)

Electronic Structure and Catalytic Activity of Doped Graphene
IKEDA Takashi, HUANG Sheng-Feng, BOERO Mauro, and TERAKURA Kiyoyuki

Mechanisms of Catalytic Activity for Carbon Alloy Catalysts
IKEDA Takashi, HUANG Sheng-Feng, BOERO Mauro, and TERAKURA Kiyoyuki