

## ASI 柚木計算物性物理研究室

### 誌 上 発 表 Publications

#### [雑誌]

(原著論文) \*印は査読制度がある論文誌

Danshita I. and Yamamoto D.: "Critical velocity of flowing supersolids of dipolar Bose gases in optical lattices", Phys. Rev. A **82**, No. 1, pp. 013645-1–013645-6 (2010). \*

Danshita I. and Polkovnikov A.: "Accurate numerical verification of the instanton method for macroscopic quantum tunneling: dynamics of phase slips", Phys. Rev. B **82**, No. 9, pp. 094304-1–094304-14 (2010). \*

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Zhu Y., Dong S., Zhang Q., Yunoki S., Wang Y., and Liu J.: "Tailoring magnetic orders in (LaFeO<sub>3</sub>)<sub>n</sub>-(LaCrO<sub>3</sub>)<sub>n</sub> superlattices model", J. Appl. Phys. **110**, No. 5, pp. 053916-1–053916-4 (2011). \*

Yamamoto D. and Danshita I.: "Stability of superflow in supersolid phases of lattice bosons with dipole-dipole interaction", J. Phys.: Con. Ser. **273**, No. 1, pp. 012020-1–012020-4 (2011). \*

Wang L., Shirakawa T., Watanabe H., and Yunoki S.: "A numerical study for two-dimensional spin 1/2 antiferromagnets: a generalization of Entanglement Perturbation Theory to two-dimensional systems", J. Phys.: Con. Ser. **273**, No. 1, pp. 012131-1–012131-4 (2011). \*

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Watanabe H., Shirakawa T., and Yunoki S.: "Spin-Orbit-Induced Mott insulator in 5d electron system", J. Phys. Soc. Jpn. **80**, SB006-1–SB006-3 (2011). \*

Okumura M., Yamada S., Machida M., and Aoki H.: "Phase-separated ferromagnetism in a spin-imbalanced system of Fermi atoms loaded in an optical ladder: A density-matrix renormalization-group study", Phys. Rev. A **83**, No. 3, pp. 031606-1–031606-4 (2011). \*

Hu A., Mathey L., Tiesinga E., Danshita I., Williams C. J., and Clark C. W.: "Detecting paired and counterflow superfluidity via dipole oscillations", Phys. Rev. A **84**, No. 4, pp. 041609-1–041609-4 (2011). \*

Hikino S. and Yunoki S.: "Anomalous enhancement of spin Hall conductivity in a superconductor/normal-metal junction", Phys. Rev. B **84**, No. 2, pp. 020512-1–020512-4 (2011). \*

Caldern M. J., Liang S., Yu R., Salafranca J., Dong S., Yunoki S., Brey L., Moreo A., and Dagotto E.: "Magnetolectric coupling at the interface of BiFeO<sub>3</sub>/La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> multilayers", Phys. Rev. B **84**, No. 2, pp. 024422-1–024422-5 (2011). \*

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#### [単行本・Proc.]

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Zhang S., Yamagawa S., Okumura M., and Yunoki S.: "Performance Acceleration of Kernel Polynomial Method Applying Graphics Processing Units", 25th IEEE International Parallel and Distributed Processing Symposium(IPDPS), Anchorage, Alaska, USA, 2011–5, IEEE, New York, pp. 564–571 (2011). \*

### 口頭発表 Oral Presentations

(国際会議等)

Yunoki S.: "Microscopic study of spin-orbit-induced Mott insulator in Ir oxides", Opening Symposium of QS2C Theory Forum, Wako, Sept. (2010).

Yamamoto D., Danshita I., and Sa de Melo C.: "Anomalous hysteretic behavior in dipolar Bose gases loaded into a triangular optical lattice", ERATO Macroscopic Quantum Control Conference on Ultracold Atoms and Molecules(UCAM2011), (ERATO UEDA Macroscopic Quantum Control Project), Tokyo, Jan. (2011).

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- (国内会議)
- 山本大輔, 段下一平: "光格子中の dipolar Bose 気体における履歴現象", 日本物理学会第 66 回年次大会, (日本物理学会), 新潟, 3 月 (2011).
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山本大輔, 段下一平, Sa de melo C. A.: “光学格子中 Bose気体のリエントラント一次相転移における異常な履歴現象”, USS-2012, (日本原子力研究開発機構), 東京, 1月 (2012).

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