

Publication List

Taro Fukazawa (深澤 太郎)

June 25, 2019

Original Papers

- T. Fukazawa and H. Akai. A new practical scheme for the optimized effective potential method. *Journal of Physics: Condensed Matter*, 22:405501, September 2010.
- S. Iwasaki, T. Fukazawa, M. Ogura, and H. Akai. First-principles calculations of YMn_2 . *Journal of the Physical Society of Japan Supplement*, 81:SB032, November 2012.
- Masaaki Geshi and Taro Fukazawa. Pressure induced band gap opening of AlH_3 . *Physica B: Condensed Matter*, 411:154, February 2013.
- Taro Fukazawa and Hisazumi Akai. Optimized effective potential method and application to static RPA correlation. *Journal of Physics: Condensed Matter*, 27(11):115502, March 2015.
- Taro Fukazawa, Akihisa Kiyota, and Chuzo Ninagawa. Aggregated transfer function for smart grid FastADR feedback control of wide area distributed building facilities. *IEEE Transactions on Electrical and Electronic Engineering*, 10(4):487, July 2015.
- Taro Fukazawa, Tomohisa Yamada, and Chuzo Ninagawa. Theoretical performance analysis on transmission reserve table buffer with triage ranking for resource-limited control networks. *IEEE Transactions on Electrical and Electronic Engineering*, 11(1):91, January 2016.
- Taro Fukazawa, Yuji Iwata, Junji Morikawa, and Chuzo Ninagawa. Stabilization of neural network by combination with ar model in FastADR control of building air-conditioner facilities. *IEEE Transactions on Electrical and Electronic Engineering*, 11(1):124, January 2016.
- Taro Fukazawa, Hisazumi Akai, Yosuke Harashima, and Takashi Miyake. First-principles study of intersite magnetic couplings in NdFe_{12} and NdFe_{12}X ($\text{X} = \text{B}, \text{C}, \text{N}, \text{O}, \text{F}$). *Journal of Applied Physics*, 122(5):053901, August 2017.

- Taro Fukazawa, Hisazumi Akai, Yosuke Harashima, and Takashi Miyake. First-principles Study of Intersite Magnetic Couplings and Curie Temperature in $R\text{Fe}_{12-x}\text{Cr}_x$ ($R = \text{Y, Nd, Sm}$). *Journal of Physical Society of Japan*, 87(4), March 2018.
- Yosuke Harashima, Taro Fukazawa, Hiori Kino, and Takashi Miyake. Effect of R -site substitution and the pressure on stability of $R\text{Fe}_{12}$: A first-principles study. *Journal of Applied Physics*, 124(16):163902, October 2018.
- Taro Fukazawa, Hisazumi Akai, Yosuke Harashima, and Takashi Miyake. First-principles study of spin-wave dispersion in $\text{Sm}(\text{Fe}_{1-x}\text{Co}_x)_{12}$. *Journal of Magnetism and Magnetic Materials*, 469:296 – 301, January 2019.
- Taro Fukazawa, Yosuke Harashima, Zhufeng Hou, and Takashi Miyake. Bayesian optimization of chemical composition: A comprehensive framework and its application to $R\text{Fe}_{12}$ -type magnet compounds. *Phys. Rev. Materials*, 3:053807, May 2019.
- Taro Fukazawa, Hisazumi Akai, Yosuke Harashima, and Takashi Miyake. Curie temperature of $\text{Sm}_2\text{Fe}_{17}$ and $\text{Nd}_2\text{Fe}_{14}\text{B}$: A first-principles study. *IEEE Transactions on Magnetics*, 55(7):2101305, July 2019.

Presentations at Conferences

- T. Fukazawa and H. Akai. Exact-exchange based investigation of heusler alloys. In *The 10th Asian Workshop on First-principles electronic Structure Calculations*, Hiroshima University, Higashi-Hiroshima, Japan, October 2007. Poster presentation.
- T. Fukazawa and H. Akai. An effective approximate method of determining optimized effective potentials for extended systems. In *International Conference on Quantum Simulators and Design 2008*, Tokyo, Japan, May 2008. Poster presentation.
- Taro Fukazawa and Hisazumi Akai. A fast optimized effective potential method with EXX and RPA level correlation. In *International Symposium of Electronic Structure Calculations – Theory, Correlated and Large Scale Systems and Numerical methods–*, University of Tokyo, Japan, December 2009. Poster presentation.
- Taro Fukazawa and Hisazumi Akai. Development of a method of first principles electronic structure calculation using optimized effective potential. In *3rd-ICNDR: International Conference of Core Research and Engineering Science of Advanced Materials & Third International Conference on Nanospintronics Design and Realization*, May 2010. Poster presentation.
- Taro Fukazawa and Hisazumi Akai. Practical method of OEP scheme and its application to rpa level correlation energy. In *Psi-k Conference 2010*, Henry Ford Building, Berlin, Germany, September 2010. Oral presentation.

- Taro Fukazawa. Development of a method of first-principles electronic structure calculation using the optimized effective potential method. In *INSND Nanoscience Seminar (No.2)*, Graduate School of Science, Osaka University, Japan, February 2011. Oral presentation.
- Taro Fukazawa. Development of a method of first-principles calculation using the optimized effective potentials. In “*International Workshop on Nano-Spintronics*” and “*JSPS core-to-Core Program Kick-Off Meeting*”, June 2012. Poster presentation.
- Taro Fukazawa. Reformulated optimized effective potentials and its application with static random-phase-approximation correlation. In *International Symposium on Computics: Quantum Simulation and Design (ISC-QSD)*, Osaka University Hall, Osaka, Japan, October 2012. Poster presentation.
- Takao Kotani, Hiori Kino, and Taro Fukazawa. Quasiparticle self-consistent gw method in the linearized (apw+mto) method. In *International Symposium on Computics: Quantum Simulation and Design (ISC-QSD)*, Osaka University Hall, Osaka, Japan, October 2012. Poster presentation.
- Masaaki Geshi and Taro Fukazawa. Band gap opening of AlH_3 under high pressure. In *8th Handai Nanoscience and Nanotechnology International Symposium*, Ichō-kaikan, Osaka University, Japan, December 2012. Poster presentation.
- Taro Fukazawa and Hisazumi Akai. Optimized effective potential method and its application to static RPA correlation. In *Green’s Functions in ab initio Electronic Structure Calculations of Solids: From Implementation to Applications*, Physikzentrum Bad Honnef, Germany, February 2015. Oral presentation.
- Taro Fukazawa, Hisazumi Akai, Yosuke Harashima, and Takashi Miyake. Inter-site magnetic couplings in $\text{NdFe}_{12-\delta}\text{M}_\delta$ ($\text{M} = \text{K-Br}$). In *CSW2017*, Shonan Village Center, Japan, March 2017. Poster presentation.
- Yosuke Harashima, Taro Fukazawa, Kiyoyuki Terakura, Hiori Kino, Shoji Ishibashi, and Takashi Miyake. Effects of crystal structure and nitrogeneration on magnetization and magnetocrystalline anisotropy in $\text{Y}_{n-m}\text{Fe}_{5n+2m}$ [(n,m)=(1,0), (2,1), (3,1)]. In *CSW2017*, Shonan Village Center, Japan, March 2017. Poster presentation.
- Taro Fukazawa, Hisazumi Akai, Yosuke Harashima, and Takashi Miyake. First-principles study of spin-wave dispersion in $\text{Sm}(\text{FeCo})_{12}$. In *Intermag2018*, Marina Bay Sands Convention Centre, Singapore, April 2018. Poster presentation.
- Zhufeng Hou, Taro Fukazawa, Yosuke Harashima, Kiyoyuki Terakura, and Takashi Miyake. First-principles study on stability and magnetism of ZFe_{12}

(Z from K to Rn) compounds. In *The 25th International Conference on Rare-Earth Permanent Magnets and Their Applications (REPM2018)*, Peking University, China, August 2018. Oral presentation.

- Taro Fukazawa. A machine-learning scheme for searching new rare-earth magnet compounds. In *Sixth Japan–U.S. Bilateral meeting on rare metals*, Washington Marriot Wardman Park, Washington, DC, United States, January 2019. Invited talk.

Awards

- Student poster award, June 2010. 3rd-ICNDR: International Conference of Core Research and Engineering Science of Advanced Materials & Third International Conference on Nanospintronics Design and Realization.
- Best RA award, March 2011. “Core Research and Engineering of Advanced Materials– Interdisciplinary Education Center for Materials Science” project, Osaka University , supported by Global COE program, MEXT, Japan.
- A winner of Judges’ Selection in “Art in magnetism” contest, April 2018. 2018 IEEE International Magnetism Conference (Intermag2018).