## STAFF HANDBOOK



(SCOPUS)(SINTA)

Name	Teguh Budi Prayitno
Position	Lecturer in Physics Education, Universitas Negeri Jakarta
Educational Background	<ol> <li>Bachelor's Degree in Physics, Institut Teknologi Bandung (2005)</li> <li>Magister's Degree in Physics, Institut Teknologi Bandung (2007)</li> <li>Doctoral Degree in Physics, Kanazawa University (2018)</li> </ol>
Academic Career (Employment)	Lecturer, reviewer
Research and	1. 2017-ongoing: Spin spiral and its application
Development	2. 2019-2020: Bose-Einstein condensation
project over the	3. 2021-ongoing: Thermoelectric materials
last 5 years	
Industry	1. 2018-2019: Kanazawa University
collaboration/	2. 2022-ongoing: National Research and Innovation Agency (BRIN)
Community	
Services over the	
last 5 year	
Patents and	1. 2018: Code for spin spiral calculation
Intellectual	2. 2019: Code for producing probability amplitude of harmonic
Property Right	oscillator using Mathematica
(IPR)	3. 2020: Code for arranging magnetic moment on certain orbitals
	4. 2021: Code for producing phase portrait of relativistic particle under harmonic oscillator potential
	5. 2021: Code for producing phase portrait of relativistic particle under anharmonic oscillator potential for 3rd order
	6. 2021: Code for producing phase portrait of relativistic particle under anharmonic oscillator potential for 4 <sup>th</sup> order

Important publications over	7. <b>T. B. Prayitno</b> and F. Ishii, Implementation of generalized bloch theorem using linear combination of pseudo-atomic orbitals,
the last 5 years	Journal of the Physical Society of Japan 87 (2018) 114709
	8. T. B. Prayitno and F. Ishii, First-principles Study of Spiral Spin
	Density Waves in Monolayer MnCl2 Using Generalized Bloch Theorem, Journal of the Physical Society of Japan 88 (2019)
	104705
	9. <b>T. B. Prayitno</b> and F. Ishii, Carrier-induced antisymmetric-
	symmetric tendencies of spin stiffness in zigzag graphene nanoribbons, Journal of Physics: Condensed Matter 31 (2019) 365801
	10. <b>T. B. Prayitno</b> and F. Ishii, First-principles Study of Spin-wave
	Excitations of 3d Transition Metals with Linear Combination of
	Pseudo-atomic Orbitals, Journal of the Physical Society of Japan 88 (2019) 054701
	11. T. B. Prayitno and E. Budi, Applied electric field on zigzag
	graphene nanoribbons: reduction of spin stiffness and appearance
	of spiral spin density waves, Journal of Physics: Condensed Matter 32 (2019) 105802
	12. <b>T. B. Prayitno</b> , Electric-field-induced spin spiral state in bilayer zigzag graphene nanoribbons, Journal of Physics: Condensed Matter 33 (2020) 065805
	13. <b>T. B. Prayitno</b> , Carrier-induced phase transition in metal dichlorides XCl <sub>2</sub> (X: Fe, Co, and Ni), Journal of Magnetism and Magnetic Materials 517 (2020) 167386
	14. <b>T. B. Prayitno</b> , Spin stiffness of bilayer zigzag graphene nanoribbon for several configurations, Physica E 118 (2020), 113916
	15. <b>T. B. Prayitno</b> , Controlling phase transition in monolayer metal diiodides XI <sub>2</sub> (X: Fe, Co, and Ni) by carrier doping, Journal of Physics: Condensed Matter 33 (2021) 335803
	16. <b>T. B. Prayitno</b> , Impossibility of increasing Néel temperature in
	zigzag graphene nanoribbon by electric field and carrier doping, Physica E 129 (2021), 114641
	17. <b>T. B. Prayitno</b> , Tuning the magnetic states in AA-stacked bilayer
	zigzag graphene nanoribbons Communications in Science and
	Technology 7 (2022), 73
Activities in	-
Professional	
organizational over	
the last 5 years	