

CURRICULUM VITAE



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Researcher Profile

Google Scholar profile : <https://scholar.google.com/citations?user=WaLk-HAAAAAJ&hl=en>
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Education:

1983 - 1990 Secondary School, [Chung Ling High School](#), Penang, Malaysia
1991 – 1994 B.Sc. (Hons) in physics, [Department of Physics, University of Malaya](#), Kuala Lumpur, Malaysia.
1994 – 1997 M.Sc. in elementary particle physics, [Department of Physics, University of Malaya](#), Kuala Lumpur, Malaysia.
1999 – 2003 Ph. D., in high energy physics, [School of Physics, The University of Melbourne](#), Melbourne, Australia.

Awards and scholarships:

- Studentship, 1995 – 1996, [University of Malaya](#), MALAYSIA.
- Overseas Postgraduate Research Scholarship (OPRS), 1999 – 2002, awarded by the Australian Government.
- Melbourne Research Scholarships (MIRS), 1999 – 2002, awarded by The University of Melbourne, AUSTRALIA.
- Anugerah Pendidik Sanjungan USM award (Equivalent to excellent teaching award) year 2008 by Universiti Sains Malaysia.

Professional experience:

September 1994 - April 1995

Demonstrator in Pusat Asasi Sains,

November 1994 - November 1996	University of Malaya, MALAYSIA. Demonstrator and Tutor in Physics Department, University of Malaya, MALAYSIA
November 1996 – September 1997	Lecturer in Microelectronics Division, School of Science and Arts, Tunku Abdul Rahman College, Kuala Lumpur, MALAYSIA.
May 1998 – May 1999	Lecturer in School of Engineering, KDU College, Penang, MALAYSIA.
July 1999-2002	Demonstrator and Tutor in School of Physics, The University of Melbourne, AUSTRALIA.
March 2003- May 2003	Postdoctoral researcher, The Research Center for Cosmology and Particle Astrophysics (COSPA) , National Taiwan University, Taiwan.
July 2003 – Jan 2007	Lecturer, School of Physics, Universiti Sains Malaysia , Penang.
Jan 2007 - Aug 2017	Senior Lecturer, School of Physics, Universiti Sains Malaysia , Penang.
Sept 2017 - Present	Associate Professor, School of Physics, Universiti Sains Malaysia , Penang.

Research interests:

- Computational physics: Finite difference time-domain method for simulating the propagation of electromagnetic waves.
- Computational materials science: Density-functional theory; Calculation of atomic and electronic structure of crystalline; Molecular dynamics simulation.
- Computational condensed matter physics: Quantum Monte Carlo calculations; Theory of High-Tc superconductivity
- Theoretical high energy physics: Neutrino physics; Beyond the Standard Model.
- Application of machine learning on physical systems

Selected publications:

66. Wan Yin Tew, Chen Ying, Zhang Wujun, Liu Baocai, Tiem Leong Yoon, Mun Fei Yam, and Chen Jingying, Application of FT-IR spectroscopy and chemometric technique for the identification of three different parts of *Camellia nitidissima* and discrimination of its authenticated product, *Frontiers in Pharmacology*, 27 September 2022.
URL: <https://www.frontiersin.org/articles/10.3389/fphar.2022.931203/full>. DOI: 10.3389/fphar.2022.931203.
65. Ying Li Thong, Tiem Leong Yoon, A Neural Network Representation of Generalized MultiparticleMie-Solution, *Progress In Electromagnetics Research M*, 112, (2022), 15- 28 (2022).
URL: <http://www.jpier.org/PIERM/view/22050504/>. DOI: 10.2528/PIERM22050504.
64. Lay Chen Low, Yee Hui Robin Chang, Yik Seng Yong, Thong Leng Lim, Tiem Leong Yoon, Kian Ming Lim, New phase of lead chalcogenide alloy: Ternary alloy PbSrSe₂ for future thermoelectric application, *Materialia* (2022), DOI: 10.1016/j.mtla.2022.101443,
URL: <https://www.sciencedirect.com/science/article/pii/S2589152922001260>.
63. Yik Seng Yong, Yee Hui Robin Chang, Lay Chen Low, Thong Leng Lim, Tiem Leong Yoon, Pressure-induced enhancement of mechanical performance in ZrC system, *International Journal of Quantum*

Chemistry, e26897 (2022). DOI: 10.1002/qua.26897.

URL: <https://onlinelibrary.wiley.com/doi/10.1002/qua.26897>

62. Yusuf Zuntu Abdullahi, Tiem Leong Yoon, Thong Leng Lim, Adsorption and decomposition of H₂S on C₂N sheet with embedded manganese atom First-principles calculations, *Chemical Physics*, 555, 111443 (2022). DOI: 10.1016/j.chemphys.2021.111443.

URL: <https://www.sciencedirect.com/science/article/pii/S0301010421003542>

61. Yoon Tiem Leong, Yam Mun Fei, Yeap Zhao Qin, Tan Chu Shan, Chen Ying, Chen Jingying, A novel machine learning scheme for classification of medicinal herbs based on 2D-FTIR fingerprints, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 266, 120440 (2022). DOI: 10.1016/j.saa.2021.120440.

URL: <https://www.sciencedirect.com/science/article/pii/S1386142521010179>

60. Mohd Kh. M. Abu El Sheikh, Abdurahim A. Okhunov, Hasan Abu Kassim & Yoon Tiem Leong, The Effect of the Quantization of the Centrifugal Stretching on the Analysis of the Rotational Spectra of Even-Even Nuclei, *Sains Malaysiana*, 51, 1213-1227 (2022). DOI: 10.17576/jsm-2022-5104-21.

URL: https://www.ukm.my/jsm/pdf_files/SM-PDF-51-4-2022/21.pdf

59. Keat Hoe Yeoh, K.-H Chew, Yoon Tiem Leong, Y. H. R. Chang, D. S. Ong, A first-principles study of two-dimensional NbSe₂H/g-ZnO van der Waals heterostructures as a water splitting photocatalyst, *Physical Chemistry Chemical Physics*, 23, 24222-24232 (2021). DOI: 10.1039/D1CP03565G.

URL: <http://dx.doi.org/10.1039/D1CP03565G>.

58. Yee Hui Robin Chang, Tiem Leong Yoon, Keat Hoe Yeoh, Thong Leng Lim, Yik Seng Yong, Mechanical and optical properties of polymeric nitrogen achieved by compression: DFT study, *Materialia* 20, 101206 (2021). DOI: 10.1016/j.mtla.2021.101206.

URL: <https://www.sciencedirect.com/science/article/pii/S258915292100209X>

57. Mohammed K. M. Elhabbash, Mohd Mahadi Halim, Tiem Leong Yoon, A polynomial model of transmission and reflection of electromagnetic monochromatic plane waves in lossless, non-magnetic multilayer thin films subjected to an external transverse voltage, *Optical and Quantum Electronics* 53, 128 (2021) (29 pages). DOI: 10.1007/s11082-020-02731-9.

URL: <https://link.springer.com/article/10.1007/s11082-020-02731-9>.

56. Chu Shan Tan, Shin Yee Leow, Chen Ying, Choo Jun Tan, Tiem Leong Yoon, Chen Jingying and Mun Fei Yam, Comparison of FTIR spectrum with chemometric and machine learning classifying analysis for differentiating guan-mutong a nephrotoxic and carcinogenic traditional chinese medicine with chuan-mutong, *Microchemical Journal* 163, 105835 (2021) (13 pages). DOI: 10.1016/j.microc.2020.105835.

URL: <http://www.sciencedirect.com/science/article/pii/S0026265X20337772>.

55. Yee H. Robin Chang, Tiem L. Yoon, Keat H. Yeoh, Thong L. Lim, Integrated SnSSe bulk and monolayer as industrial waste heat thermoelectric materials, *Int J Energy Res.* 2020, 1– 15 (16 pages). DOI: 10.1002/er.5902. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/er.5902>

54. K. H. Yeoh, K. H. Chew, T. L. Yoon, Rusi, Y. H. R. Chang and D. S. Ong, Metal to semiconductor transition of two-dimensional NbSe₂ through hydrogen adsorption: A first-principles study, *Journal of Applied Physics* 128, 105301 (2020) (20 pages). DOI: 10.1063/5.0013866.

URL: <https://aip.scitation.org/doi/10.1063/5.0013866>

53. Yusuf Zuntu Abdullahi, Tiem Leong Yoon, Abdullahi Anderson Kassimu, Metal-free ferromagnetic semiconductor: Mechanical, electronic and magnetic properties of boron doped graphitic carbon nitride (g-C₆N₆) sheet, *Materials Chemistry and Physics* 254, 123470 (2020) (7 pages). DOI: 10.1088/1361-648X/ab7032. URL: <https://doi.org/10.1016/j.matchemphys.2020.123470>

52. Robin Chang Yee Hui, Tiem Leong Yoon, Thong Leng Lim, Pin Wai Koh and Eong Sheng Goh, Effects of oxygen variation on the improved structural stability, electronic and optical properties of ZnTeO compounds, *Journal of Physics: Condensed Matter*, Accepted Manuscript online 27 January 2020. DOI: 10.1088/1361-648X/ab7032. URL: <https://iopscience.iop.org/article/10.1088/1361-648X/ab7032>

51. K. H. Yeoh, K. -H. Chew, T. L. Yoon, Rusi and D. S. Ong, Strain-Tunable Electronic and Magnetic Properties of Two-Dimensional Gallium Nitride with Vacancy Defects, *Journal of Applied Physics* 127, 015305 (2020)(8 pages). DOI: 10.1063/1.5132417. URL: <https://doi.org/10.1063/1.5132417>

50. M.R. Omar, J.A. Karim and T.L. Yoon, An efficient Monte Carlo fission source convergence acceleration strategy adapted from the survival biasing technique, *Annals of Nuclear Energy* 138, 107164 (2020) (12 pages). DOI: 10.1016/j.anucene.2019.107164. URL: <http://www.sciencedirect.com/science/article/pii/S0306454919306747>
49. Yee Hui Robin Chang, Tiem Leong Yoon, Thong Leng Lim, Moi Hua Tuh, Magnetic resonance imaging (MRI) compatible ZrX (X = Hf, Mo and Ru) alloys with enhanced mechanical properties as alternative biomedical applications, *Scripta Materialia* 178, 82–85 (2020) (4 pages). DOI: 10.1016/j.scriptamat.2019.11.013. URL: <https://doi.org/10.1016/j.scriptamat.2019.11.013>
48. Yee Hui Robin Chang, Tiem Leong Yoon, Effects of nitrogen addition and growth condition on the enhanced mechanical properties of transition metal carbides TMC (TM = Zr, Hf), *Ceramics International* 46, 1124-1136 (2020) (13 pages). DOI: 10.1016/j.ceramint.2019.09.081. URL: <http://www.sciencedirect.com/science/article/pii/S0272884219326100>
47. Pin W. Koh, Tiem L. Yoon, Thong L. Lim, Yee H. R. Chang and Eong S. Goh, Generation of ground-state structures and electronic properties of ternary $Al_xTi_yNi_z$ clusters ($x+y+z=6$) with a two-stage density functional theory global search approach, *International Journal of Quantum Chemistry* 2019;e26079. (12 pages). DOI: 10.1002/qua.26079. URL: <https://doi.org/10.1002/qua.26079>
46. K. H. Yeoh, K.-H. Chew, Y. Z. Chu, T. L. Yoon, Rusi, and D. S. Ong, First-principles study of monolayer Be₂C as anode material for lithium-ion batteries, *Journal of Applied Physics* 126, 125302 (2019) (6 pages). DOI: 10.1063/1.5110225. URL: <https://aip.scitation.org/doi/10.1063/1.5110225>.
45. Keat Hoe Yeoh, Tiem Leong Yoon, Thong Leng Lim, Rusi and Duu Sheng Ong, Monolayer GaN functionalized with alkali metal and alkaline earth metal atoms: A first-principles study, *Superlattices and Microstructures* 130, 428 – 436 (2019) (9 pages). DOI: doi.org/10.1016/j.spmi.2019.05.011. URL: <http://www.sciencedirect.com/science/article/pii/S0749603618324285>
44. Yusuf Zuntu Abdullahi, Tiem Leong Yoon and Thong Leng Lim, Biogas detection on carbon nitride sheet with embedded Mn atom: dispersion-corrected density functional theory, *Materials Research Express*, Accepted Manuscript (2019). DOI: 10.1088/2053-1591/ab07f2. URL: <https://iopscience.iop.org/article/10.1088/2053-1591/ab07f2/pdf>
43. Yusuf Zuntu Abdullahi, Tiem Leong Yoon, Tuning the electronic and magnetic properties of Fe atom embedded heptazine sheet by atomic and molecular adsorption: First-principles calculations, *Chinese Journal of Physics* 57, 1-5 (2019) (6 pages).
42. M. H. Lian, T. L. Yoon, T. L. Lim, DFTB parameterization and its application for the global minimum search of the small boron-carbon clusters, *Chemical Physics Letters* 207, 207-210 (2019) (4 pages).
41. M. R. Omar, J. A. Karim, T. L. Yoon, The Development of a Multigroup Monte Carlo Code for TRIGA Reactors, *Nuclear Engineering and Design* 342, 99-114 (2019) (16 pages).
40. Yee Hui Robin Chang, Tiem Leong Yoon, Thong Leng Lim, Pin Wai Koh, Moi Hua Tuh, Frequency dependent linear and nonlinear optical properties of compositionally tuned inorganic CsSnX (X = Br, I) composites, *Journal of Alloys and Compounds* 779, 497- 504 (2019) (8 pages). DOI: 10.1016/j.jallcom.2018.11.171. URL:
39. Yusuf Zuntu Abdullahi, Tiem Leong Yoon and Thong Leng Lim, Elastic and electronic properties of C₂N monolayer: First-principles calculation, *Materials Research Express* 6, 025601 (2019).
38. Baharak Mehrdel, Azlan Abdul Aziz and Tiem Leong Yoon, Hydrogen bond sensing ability of CdSe/ZnS colloidal quantum dots in ionic medium, *Materials Research Express* 6, 015016 (2019).
37. Pin Wai Koh, Tiem Leong Yoon, Thong Leng Lim, Yee Hui Robin Chang, The generation of ground state structures and electronic properties of ternary $Al_kTi_lNi_m$ clusters ($k+l+m=4$) from a two-stage DFT global searching approach, *International Journal of Quantum Chemistry*; e25884 (2018) (14 pages).
36. Yusuf Zuntu Zuntu Abdullahi, Tiem Leong Yoon and Rania Edrees Adam Mohammad, Selective hydrogen adsorption on a buckled carbon nitride sheet: First-principles calculation, *Materials Research Express* 5, 125605 (2018).
35. Keat Hoe Yeoh, Tiem Leong Yoon, Hamsalekha A Kumaresan, Khian Hooi Chew, Duu Sheng Ong, Thong Leng Lim, Rusi, Functionalization of single-layer Pmma-CO by adatoms: A first-principles study of electronic, magnetic and structural properties, *Journal of Physics and Chemistry of Solids* 123, 294-299

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34. Tjun Kit Min, Tiem Leong Yoon and Thong Leng Lim, Molecular dynamics simulation of melting of silicene, *Materials Research Express* **5**, 065054 (2018).
33. Keat Hoe Yeoh, Tiem Leong Yoon, Rusi, Duu Sheng Ong and Thong Leng Lim, First-principles studies on the superconductivity of aluminene, *Applied Surface Science* **445**, 161-166 (2018) (7 pages). DOI: 10.1016/j.apsusc.2018.03.133. URL: <https://DOI.org/10.1016/j.apsusc.2018.03.133>; Corrigendum to “First-principles studies on the superconductivity of aluminene” [*Appl. Surf. Sci.* 445 (2018) 161–166], *Applied Surface Science* **463**, 1168–1169 (2019).
32. Yusuf Zuntu Abdullahi, Tiem Leong Yoon, Mohd Mahadi Halim, Md. Roslan Hashim, Thong Leng Lim, Effects of atoms and molecules adsorption on electronic and magnetic properties of s-triazine with embedded Fe atom: DFT investigations, *Philosophical Magazine* **98**, 1114-1129 (2018) (16 pages).
31. Yusuf Zuntu Abdullahi, Tiem Leong Yoon, Mohd Mahadi Halim, Md. Roslan Hashim, Thong Leng Lim, First-principles investigation of graphitic carbon nitride monolayer with embedded Fe atom, *Surface Science* **667**, 112-120 (2018) (9 pages).
30. Yusuf Zuntu Abdullahi, Yoon Tiem Leong, Mohd Mahadi Halim, Md. Roslan Hashim, Lim Thong Leng, Kazuhiko Uebayashi, Adsorption of atoms and molecules on s-triazine sheet with embedded manganese atom: First-Principles calculations, *Physics Letters A* **381**, 3664–3674 (2017)(11 pages).
29. Keat Hoe Yeoh, Tiem Leong Yoon, Duu Sheng Ong, Thong Leng Lim and Yusuf Zuntu Abdullahi, First-principles studies on the effects of halogen adsorption on monolayer antimony. *Physical Chemistry Chemical Physics* **19**, 25786-25795 (2017) (10 pages).
28. Robin Chang Yee Hui, Tiem Leong Yoon, Thong-Leng Leng Lim, Eong Sheng Goh, Thermoelectric and piezoelectric properties of predicted $Al_xIn_{1-x}N$ composites based on Ab initio calculations, *Physical Chemistry Chemical Physics* **19**, 24613-24625 (2017) (23 pages).
27. Tsung-Wen Yen, Thong-Leng Lim, Tiem-Leong Yoon and S.K. Lai, Studying the varied shapes of gold clusters by an elegant optimization algorithm that hybridizes the density functional tight-binding theory and the density functional theory, *Computer Physics Communications* **220**, 143-149 (2017) (7 pages).
26. E. S. Goh, J. W. Mah, T. L. Yoon, Effects of Hubbard term correction on the structural parameters and electronic properties of wurtzite Zn, *Computational Materials Science* **138**, 111-116 (2017) (7 pages).
25. Yusuf Zuntu Abdullahi, Tiem Leong Yoon, Mohd Mahadi Halim, Md. Roslan Hashim, Thong Leng Lim, Theoretical studies on mechanical and electronic properties of s-triazine sheet, *Philosophical Magazine* **97**, 2077-2088 (2017) (11 pages).
24. B. S. Lee, T. L. Yoon, R. Abd-Shukur, Theory of d-wave high temperature superconductivity in the cuprates involving non-linear lattice modes, *Journal of Superconductivity and Novel Magnetism* (2017) (20 pages).
23. Tjun Kit Min, Tiem Leong Yoon, Chuo Ann Ling, Shahrom Mahmud, Thong Leng Lim, Kim Guan Saw, Molecular dynamics simulations and photoluminescence measurements of annealed ZnO surfaces, *Physica E: Low-dimensional Systems and Nanostructures* **90**, 28-36 (2017) (26 pages).
22. Yee Hui Robin Chang, Tiem Leong Yoon, Thong Leng Lim, Moi Hua Tuh, High-pressure phases of $Al_xIn_{1-x}N$ compounds: First principles calculations, *Journal of Alloys and Compounds* **704**, 160–169 (2017) (10 pages).
21. Wei Chun Ng, Thong Leng Lim, and Tiem Leong Yoon, Investigation of melting dynamics of hafnium clusters, *J. Chem. Inf. Model.* **57**, 517-528 (2017) (12 pages).
20. B. Mehrdel, A. Abdul Aziz, T. L. Yoon, and S. C. Lee, Effect of chemical interface damping and aggregation size of bare gold nanoparticles in NaCl on the plasmon resonance damping, *Optical Materials Express* **7**, 955-966 (2017) (12 pages)
19. Yusuf Zuntu Abdullahi, Yoon Tiem Leong, Mohd Mahadi Halim, Md. Roslan Hashim, Mohd. Zubir Mat Jafri, Lim Thong Leng, Mechanical and electronic properties of graphitic carbon nitride sheet: First-principles calculations, *Solid State Communications* **248**, 144-150 (2016) (7 pages).
18. E.S. Goh and L.H. Ong and T.L. Yoon and K.H. Chew, Structural relaxation of BaTiO₃ slab with tetragonal (100) surface: Ab-initio comparison of different thickness, *Current Applied Physics* **16**, 1491-1497 (2016) (8 pages).

17. Y.H. Robin Chang, T.L. Yoon, T.L. Lim, Ab initio computations of the linear and nonlinear optical properties of stable compounds in Al-In-N system, *Current Applied Physics* **16**, 1277–1283 (2016) (8 pages).
16. Yee Hui Robin Chang, Tiem Leong Yoon, Thong Leng Lim and Maksim Rakitin, Thorough investigations of the structural and electronic properties of $Al_xIn_{1-x}N$ ternary compound via ab initio computations, *Journal of Alloys and Compounds* **682**, 338-344 (2016) (7 pages).
15. Yusuf Zuntu Abdullahi, Yoon Tiem Leong, Mohd Mahadi Halim, Md. Roslan Hashim, Mohd. Zubir Mat Jafri, Lim Thong Leng, Geometric and electric properties of graphitic carbon nitride sheet with embedded single manganese atom under bi-axial tensile strain, *Current Applied Physics* **16**, 809–815 (2016) (7 pages).
14. E.S. Goh, L.H. Ong, T.L. Yoon and K.H. Chew, Structural and response properties of all BaTiO₃ phases from density functional theory using the projector-augmented-wave methods, *Computational Materials Science* **117**, 306-314 (2016) (9 pages),
13. F. Tan, H. S. Lim, K. Abdullah, T. L. Yoon, and B. Holben, Monsoonal variations in aerosol optical properties and estimation of aerosol optical depth using ground-based meteorological and air quality data in Peninsular Malaysia, *Atmos. Chem. Phys.* **15**, 3755–3771 (2015) (17 pages). DOI: 10.5194/acp-15-3755-2015. URL: <http://www.atmos-chem-phys.net/15/3755/2015/acp-15-3755-2015.html>
12. Fuyi Tan, Hwee San Lim, Khiruddin Abdullah, Tiem Leong Yoon, Brent Holben, AERONET data–based determination of aerosol types, *Atmospheric Pollution Research* **6**, 682-695 (2015) (14 pages). DOI: 10.5094/APR.2015.077. URL: <http://www.sciencedirect.com/science/article/pii/S1309104215302014>
11. B. S. Lee and T. L. Yoon, Magnetic Moments due to Orbital Currents in an Electron-Lattice Model of Cuprate Superconductors, *Journal of Superconductivity and Novel Magnetism* **27**, 2673-2677 (2014) (5 pages). DOI: 10.1007/s10948-014-2753-3. URL: <http://link.springer.com/article/10.1007/s10948-014-2753-3#>
10. Thong Leng Lim, Mihail Nazarov, Tiem Leong Yoon, Lay Chen Low, M. N. Ahmad Fauzi, First-principles LDA+U calculations and luminescence study of YNbO₄, *Phys. Scr.* **89**, 095102 (2014) (7 pages). DOI: 10.1088/0031-8949/89/9/095102. URL: <http://iopscience.iop.org/1402-4896/89/9/095102>
9. T. L. Yoon, T. L. Lim, T. K. Min, S. H. Hung, N. Jakse, S.K. Lai, Epitaxial growth of graphene on 6H-silicon carbide substrate by simulated annealing method, *The Journal of Chemical Physics* **139**, 204702 (2013) (13 pages). DOI: 10.1063/1.4832043. URL: <http://aip.scitation.org/DOI/10.1063/1.4832043>
8. Thong Leng Lim, Mihail Nazarov, Tiem Leong Yoon, Lay Chen Low, M. N. Ahmad Fauzi, X-ray diffraction experiments, luminescence measurements and first-principles GGA+U calculations on YTaO₄, *Computational Materials Science* **77**, 13–18 (2013) (6 pages). DOI: 10.1016/j.commatsci.2013.03.042. URL: <http://www.sciencedirect.com/science/article/pii/S0927025613001651>
7. Wen Fong Goh, Sohail Aziz Khan and Tiem Leong Yoon, A molecular dynamics study of the thermodynamic properties of barium zirconate, *Modelling Simul. Mater. Sci. Eng.* **21**, 045001 (2013) (11 pages). DOI: 10.1088/0965-0393/21/4/045001. URL: <http://iopscience.iop.org/article/10.1088/0965-0393/21/4/045001/meta>
6. Goh Wen Fong, Yoon Tiem Leong, Sohail Aziz Khan, Molecular dynamics simulation of thermodynamic and thermal transport properties of strontium titanate with improved potential parameters, *Computational Material Science* **60**, 123–129 (2012) (7 pages). DOI: 10.1016/j.commatsci.2012.03.027. URL: <http://www.sciencedirect.com/science/article/pii/S0927025612001747>
5. S. S. Ng, T. L. Yoon, Z. Hassan, and H. Abu Hassan, Surface and interface phonon polaritons of wurtzite GaN thin film grown on 6H-SiC substrate, *Applied Physics Letters* **94**, 24191 (2009) (3 pages). DOI: 10.1063/1.3157130. URL: <http://scitation.aip.org/content/aip/journal/apl/94/24/10.1063/1.3157130>
4. T. L. Yoon and R. Foot, Cosmological implications of low scale quark-lepton unification, *Acta Phys. Polon. B* **34**, 2815 (2003) (27 pages). URL: <http://www.actaphys.uj.edu.pl/vol34/abs/v34p2815.htm>
Publisher: Jagiellonian University, Cracow, Poland
3. R. Foot and T. L. Yoon, Exotic meteoritic phenomena: The Tunguska event and anomalous low altitude fireballs - manifestations of the mirror world? *Acta Phys. Pol. B* **33**, 197 (2002) (31 pages). URL: <http://www.actaphys.uj.edu.pl/vol33/abs/v33p1979.htm>

2. T. L. Yoon and R. Foot, Solutions of the atmospheric, solar and LSND neutrino anomalies large from TeV scale quark-lepton unification, Phys. Rev. D **65**, 015002 (2002) (18 pages). DOI: 10.1103/PhysRevD.65.015002. URL: <http://journals.aps.org/prd/abstract/10.1103/PhysRevD.65.015002>
1. T. L. Yoon and R. Foot, Maximal $\nu_\mu - \nu_\tau$ oscillations, the see-saw mechanism and the Exact Parity Model, Phys. Lett. B **491**, 29 (2000) (7 pages). DOI: 10.1016/S0370-2693(00)01048-0. URL: <http://www.sciencedirect.com/science/article/pii/S0370269300010480>

Theses:

- Ph.D. Thesis (The University of Melbourne, 2003): NEUTRINOS BEYOND THE STANDARD MODEL. Thesis supervisor: Dr. [Robert Foot](#).
- Master Thesis (University of Malaya, 1997): Investigation of the momentum dependence of the flavour-changing quark-Z vertex and its implication to CP violation processes. Thesis supervisor: Prof. Dr. Swee-Ping Chia.

Research grants:

As Prime Investigator

7. In-silico measurements of wetting phenomena on structured surfaces of liquid droplets in the nanoscale, RUI Bridging Grant by USM (No. Akaun 304.PFIZIK.6316191), RM 25,000, 1 OCT 2018 – 20 SEP 2019.
6. A Combined First-Principles Calculation and Thermodynamic Modelling Of Hybrid Ferroelectric Nanostructures, RUI (Individual), Grant by USM (Kod: U1057, No. Rujukan 2013/0626), RM 125,824.40, 1 December 2013 - 30 November 2016.
5. Investigation of Graphene Growth Via Molecular Dynamics Simulation, Kementerian Pengajian Tinggi, RM60,000.00, 1/12/2013-31/5/2016.
4. Ab Initio Study of Electronic Structures of Advanced Solid Materials, FRGS grant from Kementerian Pengajian Tinggi, RM25,200.00, 15/10/2007-15/2/2010.
3. Quantum Monte Carlo Calculation of Josephson Junction Array That Acts As A Superconducting Qubit, FRGS grant from Kementerian Pengajian Tinggi, RM57,000.00, 1/4/2011-30/9/2013.
2. Investigation of Graphene Growth Via Molecular Dynamics Simulation, Kementerian Pengajian Tinggi, RM60,000.00, 1/12/2013-30/11/2015.
1. Computational Subwavelength Optics, USM Short Term Grant (Geran Penyelidikan Jangka Pendek) from USM, RM 8250, 1 Nov 04 – 31 Oct 06.

As co-researcher

1. Renewable Energy and Sustainable Development in Asia , USM (RU) , RM130,640.00, Project Head: Lean Hooi Hooi , 15/7/2012-14/7/2015.

Graduated Ph.D. and M.Sc. students (YTL as main supervisor)

10. Lian Ming Huei (Ph.D., 2019). Title: [Ground state structures of small boron and boron-carbon clusters via density functional tight binding and density functional theory](#)

9. [Siti Harwani Binti Md Yusoff](#) (Ph.D., 2018). Title: [Development of a FDTD simulation of ionosphere propagation for earthquake precursor over the Sumatera-Malaysia region](#)
8. Lee Thong Yan (Ph.D., 2018). Title: [Molecular Dynamics Studies of the Annealing of Carbon Peapods](#)
7. Min Tjun Kit (M.Sc., 2018). Title: [Molecular dynamics simulation of thermal processes for selected nano-structures](#)
6. Ong Yee Ping (M.Sc., 2018). Title: [Thermal properties and ground-state structures of pure and alloy nanoclusters via molecular dynamics simulation](#)
5. [Robin Chang Yee Hui](#) (Ph.D., 2017). Title: [Material design of III-nitride ternary via first principles calculations](#)
4. Soon Yee Yeen (M.Sc., 2017). Title: [Structural and magnetic properties of rhodium clusters](#)
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1. Goh Wen Fong (M.Sc., 2013). Title: [Study of Strontium Titanate and Barium Zirconate Properties Using Molecular Dynamics Simulation](#)

Graduated Ph.D. and M.Sc. students (YTL as co-supervisor)

3. [Baharak Mehrdel](#)* (Ph.D., 2019) Title: [Empirical modelling and experimental investigation on absorption spectra of colloidal metal nanoparticles and quantum dots suspended in ionic surrounding media](#)
2. Yusuf Zuntu* (Ph.D., 2018) Title: [Ab-initio investigation of structural, electronic, and adsorption properties of graphitic carbon nitride sheet with embedded transition metal Mn and Fe atoms](#)
1. Pauline Yew* (Ph.D., 2018) Title: [Infrared Dielectric Characteristics of Binary and Ternary III-Nitrides Heterostructures](#)

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