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Briliant Adhi Prabowo, Ph.D.

Research Fellow - International Iberian Nanotechnology Laboratory

briliant.prabowo@inl.int briliant.a.prabowo@gmail.com [+351-911-883-944](tel:+351-911-883-944)
International Iberian Nanotechnology Laboratory (INL), Av. Mestre José Veiga, Braga 4715-330, Portugal
West Java, INDONESIA [linkedin.com/in/briliant/](https://www.linkedin.com/in/briliant/) orcid.org/0000-0002-7543-5143
goo.gl/Kn1Q79



EXPERIENCE

Research Fellow

International Iberian Nanotechnology Laboratory

2019 - Ongoing Braga, Portugal

Research Fellow

Indonesian Institute of Sciences

2008 - 2019 Bandung, Indonesia

Visiting Scientist

Chang Gung University, Department of Electronics Engineering

2018 Taiwan

Joint Research

Taiwan Semiconductor Manufacturing Co.(TSMC) and Asia University

2010 - 2012 Taiwan

Joint Research

Vanguard International Semiconductor and Asia University

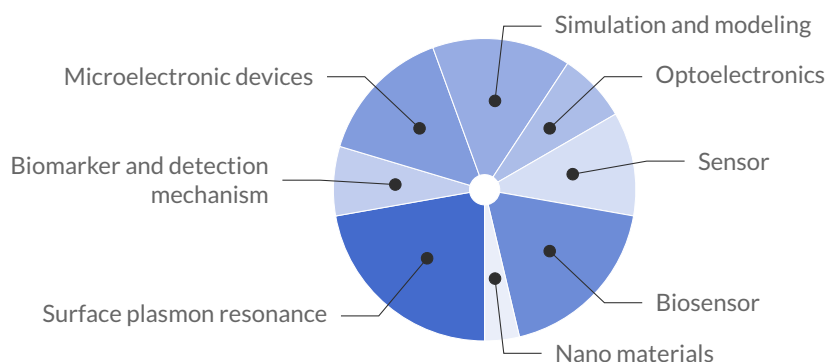
2011 - 2012 Taiwan

RF Transmission Engineer

PT. Televisi Transformasi Indonesia - Trans TV

2006 - 2007 Jakarta, Indonesia

RESEARCH INTEREST



LANGUAGES

Bahasa Indonesia
English
Chinese



EDUCATION

Ph.D. in Electronics Engineering

Chang Gung University

2017 Taiwan

References:

- Prof. Kou-Chen Liu
jacobliu@mail.cgu.edu.tw
- Prof. Hsin-Chih Lai
hclai@mail.cgu.edu.tw
- Prof. Robert Y.L. Wang
yuwang@mail.cgu.edu.tw

M.Eng. in Semiconductor Technology

Asia University

2012 Taiwan

Reference:

- Prof. Gene Sheu
gsheu@asia.edu.tw

B.Eng. in Electrical Engineering

Soegijapranata Catholic University

2001 Indonesia

Reference:

- Tecla Brenda, M.T.
brenda@unika.ac.id

AWARDS

Phi Tau Phi Scholastic Honor Society
Society member of Republic of China 2018

Satyalencana Karyasatya 2018
Medal from President of Republic of Indonesia for ten years period of duty

Best Paper Awards
2016 Symposium on Engineering, Medicine, and Biology Applications

Best Student Asia University
Summa cum laude (2012)

NSC Grant
Taiwan National Science Council Grant 2011, No: NSC-100-2922-I-468-002

1st Place Winner
National Competition Uplink Satellite TV Transmission (2007)

Finalist
Design and Building of Technology for Student of Central Java (2005)

PUBLICATIONS

Patents

- K.-C. Liu, B.A. Prabowo, J.-J. Liu (2017). *Surface Plasmon Resonance Measurement System, No: P117-1415601TW*.
- K.-C. Liu, Y.-Y. Li, and B. A. Prabowo (2014). *Surface Plasmon Resonance Measurement System, No: TW 201437627A*.

Journal Articles

- A. K Gupta; C.-H. Hsu; C.-H. Chen; A. Purwidyantri; B. A. Prabowo; J.-L. Wang; Y.-C. Tian; C-S Lai; (2019). "Au-spotted zinc oxide nano-hexagonrods structure for plasmon-photoluminescence sensor". In: *Sensors and Actuators B: Chemical* 290, pp. 100–109. ISSN: 0925-4005. DOI: <https://doi.org/10.1016/j.snb.2019.03.020>.
- A. Purwidyantri, C.-H. Hsu, C.-M. Yang, B. A. Prabowo, Y.-C. Tian, C.-S. Lai (2019). "Plasmonic Nanomaterial Structuring for SERS Enhancement". In: *RSC Advances* 9, pp. 4982–4992. DOI: <http://dx.doi.org/10.1039/C8RA10656H>.
- B.A. Prabowo, et al (2019). "Nano-film aluminum-gold for ultra-high dynamic-range surface plasmon resonance chemical sensor". In: *Frontier Optoelectronics (accepted)*. DOI: <https://doi.org/10.1007/s12200-019-0864-y>.
- B. A. Prabowo, et al (2018). "Rapid screening of Mycobacterium tuberculosis complex (MTBC) in clinical samples by a modular portable biosensor". In: *Sensors & Actuators: B. Chemical* 254, pp. 742–748. DOI: 10.1016/j.snb.2017.07.102.
- B.A Prabowo, A. Purwidyantri and K.-C. Liu (2018). "Surface Plasmon Resonance Optical Sensor: A Review on Light Source Technology". In: *Biosensors* 8.3, p. 80. DOI: 10.3390/bios8030080.
- B. A. Prabowo, et al (2017). "Rapid detection and quantification of Enterovirus 71 by a portable surface plasmon resonance biosensor". In: *Biosensors and Bioelectronics* 92, pp. 186–191. DOI: 10.1016/j.bios.2017.01.043.
- B. A. Prabowo, et al (2016b). "Performance of white organic light-emitting diode for portable optical biosensor". In: *Sens. Actuators B* 222, pp. 1058–1065. ISSN: 0925-4005. DOI: 10.1016/j.snb.2015.09.059.
- B. A. Prabowo, et al (2014). "Application of an OLED integrated with BEF and giant birefringent optical (GBO) film in a SPR biosensor". In: *Sensors and Actuators B: Chemical* 198, pp. 424–430. ISSN: 09254005. DOI: 10.1016/j.snb.2014.03.041.

Conference Proceedings

- Alom, Azharul et al. (2019). "Four-Layered Sensor Chip for Wavelength-based Surface Plasmon Resonance Biosensor". In: *Fourier Transform Spectroscopy 2019*. Vol.2019. San Jose, California United States: OSA, pp. 2–3.
- Purwidyantri, A et al. (2019). "SERS hotspots growth by mild annealing on Au film over nanospheres, a natural lithography approach". In: vol.277, p. 012034. DOI: 10.1088/1755-1315/277/1/012034. URL: <https://iopscience.iop.org/article/10.1088/1755-1315/277/1/012034>.
- Saputra, G M A et al. (2019). "Etched and non-etched polystyrene nanoballs coated with AuNPs on Indium Tin Oxide (ITO) electrode as H₂O₂ sensor". In: vol.277, p. 012032. DOI: 10.1088/1755-1315/277/1/012032. URL: <https://iopscience.iop.org/article/10.1088/1755-1315/277/1/012032>.
- B. A. Prabowo et al (2017). "Novel Four Layer Metal Sensing in Portable SPR Sensor Platform for Viral Particles Quantification". In: vol.1. 4, p. 528. DOI: 10.3390/proceedings1040528.

ORGANIZATION

- ➔ **IEEE**
Institute of Electrical and Electronics Engineers (Member ID: 92317202)
- ➔ **HIMPENINDO**
Indonesian Researcher Society (Member ID: 1499221272)


STRENGTHS

- Professional
- Conscientious
- Persuasive
- Hard-working
- Adaptive
- Communicative
- Fast learner
- Teamwork as well as individual
- Compassionate

JOURNAL REVIEWER

- Material Optic Express
- Applied Optics
- Optic Express
- Optic Letters
- Sensors and Actuators B
- Biosensor and Bioelectronics

JOURNAL EDITOR

- Indonesian Journal of Electronics and Telecommunications (JET)
 jurnalet.com

PROJECTS

Development of portable SPR biosensor for M. Tuberculosis detection

National Research Program for Biopharmaceuticals (NRPB)

 2012 – 2014  Taiwan

Detection of Human enterovirus 71 particle by SPR biosensor

Chang Gung Memorial Hospital Research Project (CMRP)

 2014 – 2017  Taiwan

LDMOS and bend gate structure reliability

Vanguard International Semiconductor

 2011 – 2012  Taiwan

Power devices reliability, BJT, ALGaN/GaN HEMT, LDMOS

Taiwan Semiconductor manufacturing Company (TSMC)

 2010 – 2012  Taiwan

- B. A. Prabowo, K.-C. Liu (2017). "Multi-metallic Sensing Layers for Surface Plasmon Resonance Sensor". In: *IEEE SCORed*. Putrajaya: IEEE. DOI: 10.1109/SCORED.2017.8305386.
- B. A. Prabowo, et al (2016a). "Graphene-based Portable SPR Sensor for the Detection of Mycobacterium tuberculosis DNA Strain". In: *Procedia Engineering*. Vol.168, pp. 541–545. DOI: 10.1016/j.proeng.2016.11.520.
- B. A. Prabowo et al. (2012). "Interface trap distribution for HCI reliability assessment on bend gate structure by 3D TCAD simulation". In: *Proceedings of the International Symposium on the Physical and Failure Analysis of Integrated Circuits, IPFA*. DOI: 10.1109/IPFA.2012.6306270.
- Purwadi et al. (2012). "Shifting Time Waveform Induced CMOS Latch Up in Bootstrapping Technique Applications". In: *IEEE IPFA*. DOI: 10.1109/IPFA.2012.6306305.
- A. Prakash et al. (2011). "Effects of SiO₂ passivation on AlGa_N/Ga_N HEMT by self-consistent electro-thermal-mechanical simulation". In: *IEEE 10th ICEMI*. DOI: 10.1109/ICEMI.2011.6037722.
- B. A. Prabowo et al. (2011). "Self-Consistent Electro-Thermo-Mechanical Analysis of AlN Passivation Effect on AlGa_N/Ga_N HEMTs". In: *IEEE TENCON 2011*. Bali, Indonesia: IEEE. DOI: 10.1109/TENCON.2011.6129029.
- R. Kumar et al. (2011). "Analysis of Si₃N₄ passivation effect by self-consistent electro-thermal-mechanical simulation in AlGa_N/Ga_N heterostructure HEMTs". In: *Proceedings - IEEE 2011 10th International Conference on Electronic Measurement and Instruments, ICEMI 2011*. Vol.1. ISBN: 9781424481590. DOI: 10.1109/ICEMI.2011.6037721.