

Name	Prof. Dr.-Ing. Setyawan P. Sakti, M.Eng.		
Position	Professor		
Scopus ID	6507450797		
Link google scholar	https://scholar.google.com/citations?hl=en&user=_pnkU1oAAAAJ		
Academic Career	Doctoral Degree	University	Year
	Sensor and Micro System	University of Magdeburg, Jerman	2000
	Master degree	University	Year
	Sensor Science and Engineering	University of South Australia	1994
	Undergraduate degree	University	Year
	Physics	Universitas Gadjah Mada	1989
Employment	Position	Employer	Period
	Lecturer	FMIPA	1990
Research and development projects over the last 5 years	Name of project or research focus	Funding Sources/amount of financing (in million rupiah)	Period
	Sensor deteksi kekentalan plasma darah penderita diabetes dengan suhu sample terkontrol (Pengembangan instrumen PCR dengan rapid thermal cycler dan deteksi total DNA termultiplikasi realtime)	PDUPT / 163.2	2020
	Sistem electronic nose untuk deteksi senyawa volatil pada produk herbal dalam konsentrasi sub ppm	PMDSU / 59.9	2020
	Pengembangan system deteksi gas senyawa aromatik dengan menggunakan lapisan polimer berdasarkan sifat swelling dan adsorpsi	HIBAH-GB / 100	2020
	Instrument Kuantitatif Real Time PCR (qrt-PCR) Digital Portable dengan Pengolah Citra dan Data Terintegrasi ke Cloud	Ristekbrin / 66.5	2020
	Sistem electronic nose untuk deteksi senyawa volatil pada produk herbal dalam konsentrasi sub ppm	PMDSU / 59.6	2019

	Sensor deteksi kekentalan plasma darah penderita diabetes dengan suhu sample terkontrol	PDUPT / 176.9	2019
	Pengembangan system deteksi gas senyawa aromatik dengan menggunakan lapisan polimer berdasarkan sifat swelling dan adsorpsi	HIBAH-GB / 100	2019
	Sensor QCM dengan Rangsangan Pulsa Eksternal untuk Deteksi Cepat Kekentalan Plasma Darah Penderita Kencing Manis	HIKOM / 142.5	2018
	Pengembangan Ti ⁴⁺ -IMAC Monolith Dalam Polypropylene Tip Untuk Analisis Peptida Terfosforilasi Dalam Sampel Biologi Secara Selektif, Cepat dan Akurat	PDUPT / 109.5	2018
	Pengembangan QCM Biosensor dengan Micro Patterning Lapisan Matrik Immobilisasi untuk Piranti Diagnostik	PUPT / 271.9	2017
	Sensor QCM dengan Rangsangan Pulsa Eksternal untuk Deteksi Cepat Kekentalan Plasma Darah Penderita Kencing Manis	HIKOM / 130.2	2017
	Development Of Plasma Oxidation System for Industries and Medical Application (JSPS-DIKTI)	HKLN / 150	2017
	Sensitivity Enhancement of QCM Sensor through Surface Etching as a Basis for High Sensitive Immunosensor for GAD65 Detection	HKLN / 160	2016
	Profiling dan Deteksi Fosfopeptida Dari Serum Secara Akurat Menggunakan Immobilized Metal-ion Affinity Chromatography (IMAC) Berbasis Teknologi Monolith (Suatu Metode Untuk Menemukan Biomarker Suatu Penyakit)	PUPT / 225	2016
	Pengembangan QCM Biosensor dengan Micro Patterning Lapisan Matrik Immobilisasi	PUPT / 250	2016

	untuk Piranti Diagnostik		
	Development Of Plasma Oxidation System for Industries and Medical Application (JSPS-DIKTI)	HKLN / 150	2016
	Partners, if applicable		
Published Books	Title	Publisher	Year
	Panduan pembelajaran daring saat kondisi darurat covid-19	Jurusan Sosial Ekonomi Pertanian, Fakultas Pertanian	2020
	Pengantar teknologi Sensor: Prinsip Dasar Sensor Besaran Mekanik	UB Press	2017
	Mekanika	UB Press	2016
Industry collaborations over the last 5 years	Project Titles	Partners	Period
Patents and proprietary rights	Titles		Year
	Program VHDL Pencacah Frekuensi 10mhz Resolusi 0.5Hz Dengan Pewaktu Oscillator 100mhz		2020
	Pencacah frekuensi pic18f45k550 dengan komunikasi usb-hid		2020
	Panel layar led untuk visualisasi perubahan kerapatan bahan fluida yang tidak kasat mata		2020
	Program vhdl pencacah frekuensi resolusi 0.5hz dengan deteksi signal rising dan falling		2020
	Data akuisisi sensor qcm 4 kanal		2020
	Sel pengukuran sensor qcm untuk alat deteksi kekentalan plasma darah penderita kencing manis		2019
	Sel reaksi statik gravitasional untuk qcm biosensor dan sensor kimia		2018
	Monolith Polimer Organik Berbahan Dasar Metakrilat untuk Deteksi DNA		2017
	Reaktor kompak trans-esterifikasi kontinyu untuk produksi biodiesel berbasis gelombang mikro		2014
	Kompor matahari Type Kotak dan Alat Masaknya		2013
Important publications over the last 5 years	Selected recent publications from a total of approx. (give total number): 40		
	1. S.P. Sakti, P.S. Arinda, R.N. Ikhsani, 2020, Thermoelectric Based Temperature, Control Box for QCM Sensor Measurement Cell, SUranaree Journal of Science and Technology, 27(3),030029(1-9)		
	2. D.D. Kamasi, M. Zainulloh, A. Nadhir, S.P. Sakti, 2020, The cascaded thermoelectric cooler driven by pulse width modulation method, AIP Conference Proceedings, 2256: 060004 (DOI:		

	https://doi.org/10.1063/5.0014506)
	3. E. Poerbaningtyas, R.S. Dradjat, A.T. Endharti, S.P. Sakti, E. Widjajanto, Y. Yueniwati M.H. Purnomo, 2020, Optimizing Infrared Camera Resolution for Small Object Detection using Subpixel Rendering and PIFS in Multiresolution Image Analysis, <i>Journal of Biomedical Physics and Engineering</i> , 10(3): 261-272 (DOI: 10.31661/jbpe.v0i0.1197))
	4. E. Poerbaningtyas, R.S. Dradjat, A.T. Endharti, S.P. Sakti, E. Widjajanto, 2020, Screening through Temperature and Thermal Pattern Analysis in DMBA - Induced Breast Cancer in Wistar Rats, <i>Journal of Biomedical Physics and Engineering</i> , Article in Press
	5. R Oktafiansyah, D.J.D.H. Santjojo, S.P. Sakti, T.N. Zafirah, M. Ghufro, Masruroh, 2020, Swelling Effect Observation of The Copper Phthalocyanine Layer on QCM and Its Effect on Surface Roughness and Morphology Changes, <i>IOP Conference Series: Materials Science and Engineering</i> 833(1): 012082 (DOI: https://doi.org/10.1088/1757-899X/833/1/012082)
	6. M Setiana, T.N. Zafirah, S.P. Sakti, 2020, Impedance Spectrum of QCM Sensor Coated With 18-Crown-6-Ether Solved in THF, Chloroform and Toluene, <i>IOP Conference Series: Materials Science and Engineering</i> 833(1): 012091 (DOI: https://doi.org/10.1088/1757-899X/833/1/012091)
	7. (R.A. Pratiwi, M.A. Akbar, S.P. Sakti, 2020, Influence of the liquid injection hole to ripple frequency of the QCM sensor, <i>Journal of Physics: Conference Series</i> 1528(1): 012061 (DOI:))
	8. (D.D. Kamasi, M. Zainulloh, A. Nadhir, S.P. Sakti, 2020, Comparison between two-stage and three-stage Peltier thermoelectric coolers driven by pulse width modulation, <i>Journal of Physics: Conference Series</i> , 1528(1): 012020 (DOI:))
	9. (M.A. Akbar, S Rianto and S.P. Sakti, 2020, Analysis of the relation between glucose concentration in water and resonant frequency using the resonance model, <i>Journal of Physics: Conference Series</i> , 1465: 012002 (DOI: 10.1088/1742-6596/1465/1/012002))
	10. (R.A Pratiwi, M.A. Akbar and S.P. Sakti, 2020, Flow rate influence of the peristaltic-based pumps on the QCM sensor, <i>Journal of Physics: Conference Series</i> , 1465: 012003 (DOI: 10.1088/1742-6596/1465/1/012003))
	11. (S.P. Sakti, D.D. Kamasi, S.A. Nuha, M Setiana, 2020, Uneven Coating Influences on Electrical Impedance of Quartz Crystal Microbalance, <i>Journal of Physics Conference Series</i> , 1428(1): 012060 (DOI: 10.1088/1742-6596/1428/1/012060))
	12. (S.A. Nuha, N.F. Khusnah, D.D.Kamasi & S.P. Sakti, 2019, Polystyrene Micro-pools Distribution on Quartz Crystal Microbalance (QCM) Surface using Ultrasonic Atomization Spray Coating, <i>IOP Conference Series: Materials Science and Engineering</i> , 546: 042029 (DOI: 10.1088/1757-899X/546/4/042029))

	13. (S.P. Sakti, E.R.N. Akbar, D.D Kamasi & A. Naba, 2019, Impedance Measurement of the Quartz Crystal Microbalance using Phase Gain Detector and Digital Storage Oscilloscope, IOP Conference Series: Materials Science and Engineering, 546: 042040 (DOI: 10.1088/1757-899X/546/4/042040))
	14. (M.A. Akbar, S. Rianto & S.P. Sakti, 2019, Liquid Impedance Analyser for Glucose Concentration in Water using Resonance Model, IOP Conference Series: Materials Science and Engineering, 546: 032001 (DOI: 10.1088/1757-899X/546/3/032001))
	15. (D.H. Pitaloka, R.N. Ikhsani, A. Naba and S.P. Sakti, 2019, Thermoelectric-based temperature control for rapid heating and cooling, IOP Conference Series: Materials Science and Engineering, 546: 032026 (DOI: 10.1088/1757-899X/546/3/032026))
	16. (Masruroh, D.J.D.H. Santjojo, Abdurrouf, M.A. Abdillah, M.C. Padaga & S.P. Sakti, 2019, Effect of Electron Density and Temperature in Oxygen Plasma Treatment of Polystyrene Surface, IOP Conference Series: Materials Science and Engineering, 515: 012061 (DOI: 10.1088/1757-899X/515/1/012061))
	17. (S.P. Sakti, Masruroh, D. D. Kamasi, N.F. Khusnah, 2019, Stearic Acid Coating Material Loading Effect to Quartz Crystal Microbalance Sensor, Materials Today: Proceedings 13P1, pp. 53-58 (DOI: 10.1016/j.matpr.2019.03.186))
	18. (T.N. Zafirah, S.P. Sakti, D.J.D.H. Santjojo, Masruroh, 2019, Observation of the Polystyrene Swelling Effect using Quartz Crystal Microbalance, Materials Today: Proceedings 13P1, pp. 18-23 (DOI: 10.1016/j.matpr.2019.03.180))
	19. (N.F. Khusnah, Masruroh, D.J.D.H. Santjojo, S.P. Sakti, 2019, Surface Profile of Polystyrene Film on the QCM sensor Deposited by Ultrasonic Atomizer Spray Coating, Materials Today: Proceedings 13P1, pp. 143-148 (DOI: 10.1016/j.matpr.2019.03.204))
	20. (P.S. Arinda, S.P. Sakti, Masruroh, D.J.D.H. Santjojo, 2019, Stability of Polystyrene Film Surface Wettability Modified using Oxygen Plasma, Materials Today: Proceedings 13P1, pp. 24-29 (DOI: 10.1016/j.matpr.2019.03.181))
	21. (I. Rosadi, N. F. Khusnah & S.P. Sakti, 2019, Real-Time Monitoring System for Polystyrene Coating Material Deposition onto QCM Sensor using Ultrasonic Atomizer Spray, Journal of Physics: Conference Series, 1153: 012042 (DOI: 10.1088/1742-6596/1153/1/012042))
	22. (S.P. Sakti & P.S. Arinda, 2019, Effect of the Polystyrene Surface Hydrophobicity on QCM Sensor Resonance Frequency In Contact with Water-Glycerol Mixture, Journal of Physics: Conference Series, 1153: 012044 (DOI: 10.1088/1742-6596/1153/1/012044))
	23. (Putri N P, Lavinia R P, Santjojo D J D H, Masruroh M and Sakti S P, 2018,

	The effect of oxygen plasma treatment on the hydrophobicity of polyaniline surface, Proceedings of the International Conference on Science and Technology (ICST 2018), 1: 779–84 (DOI:)
	24. (Masruroh, T.N. Zahirah, Aulanni'am, S.P. Sakti, D.J.D.H. Santjojo, 2018, The effect of molecular weight on the surface wettability of polystyrene treated with nitrogen plasma, IOP Conference Series Materials Science and Engineering, 432: 012036 (DOI: 10.1088/1757-899X/432/1/012036))
	25. (R. N. Ikhsani, D. J. D. H. Santjojo and S. P. Sakti, 2018, Design of Low Noise Micro Liter Syringe Pump for Quartz Crystal Microbalance Sensor, International Conference on Electrical Engineering, Computer Science and Informatics (EECSI), Malang, Indonesia, 598-602 (DOI: 10.1109/EECSI.2018.8752626))
	26. (S. P. Sakti, R. D. Kusuma, I. Rosadi, R. N. Ikhsani and A. Naba, 2018, Accuracy and Stability of Sinusoidal Signal Generated using DDS-9910 and TCXO as Reference Clock, Electrical Power, Electronics, Communications, Controls and Informatics Seminar (EECCIS), Batu, East Java, Indonesia, 146-149 (DOI: 10.1109/EECCIS.2018.8692980))
	27. (I. Pujiwati, N. Aini, S.P. Sakti & B. Guritno, 2018, The Effect of Harmonic Frequency and Sound Intensity on the Opening of Stomata, Growth and Yield of Soybean (<i>Glycine max(L.) Merrill</i>), <i>Pertanika Journal of Tropical Agricultural Science</i> , 41(3): 963-974 (DOI:))
	28. (S.P. Sakti, N.F. Khusnah, D.J.D.H. Santjojo, Masruroh, A. Sabarudin, 2018, Surface Modification of Polystyrene Coating on QCM Sensor using Ambient Air Plasma at Low Pressure, <i>Materials Today:Proceedings</i> , 5(7): 15139-15144 (DOI:))
	29. (N. F. Khusnah, S.P. Sakti & D.J.D.H. Santjojo, 2018, Oxygen Plasma Effect on QCM Sensor Coated Polystyrene Film, <i>IOP Conference Series: Material Science & Engineering</i> , 367: 012030 (DOI:))
	30. (R.N. Ikhsani, T. Aizawa, E.E. Yunata, D.J.D.H Santjojo, S. P. Sakti, 2018, Micro-Texturing into the Graphite Part for Joining and Packaging, 12th South East Asian Technical University Consortium (SEATUC), Yogyakarta, Indonesia (DOI:))
	31. (S.W.Fitriani, T. Aizawa, D.J.D.H. Santjojo, Masruroh, S.P. Sakti, 2018, Micro-Texturing into DLC Coating on the SKD11 Die via the High-Density Plasma Oxidation, 12th South East Asian Technical University Consortium (SEATUC), Yogyakarta, Indonesia, (DOI: 10.1109/SEATUC.2018.8788882))
	32. (L. S. Hudha, D.R. Santosa, S.P. Sakti, 2017, Pengembangan Sistem Embedded Berbasis ARM CORTEX M7 untuk Pengukuran Frekuensi Sensor QCM Portable, <i>Majalah Teknik Elektro</i> , 16(3): 133-138 (DOI:))
	33. (Masruroh, M.A. Hanif, S.P. Sakti, D.J.D.H. Santjojo, 2017, Plasma power effect on the surfaces of a quartz crystal during etching using tetrafluoroethane gas, <i>International Journal of Technology</i> , 8(8): 1525-1532

	(DOI:))		
	34. (T.A Rusly, DJDH Santjojo, S.P. Sakti, Masruroh, 2017, The effectiveness study of SnCl ₂ . 2H ₂ O masking on the formation of QCM profile using wet etching technique with KOH solution, Natural B, 4(2): 111-116 (DOI:))		
	35. (S.P. Sakti, R.Y. Aji, L. Amaliya, Masruroh, 2017, Low-Cost Contact Angle Measurement System for QCM Sensor, Telkomnika, 15(2): 560-569 (DOI:))		
	36. (S.P. Sakti, L. Amaliya, N.F. Khusnah, Masruroh, 2017, Effect of UV Radiation Duration and Molecular Weight to Hydrophobicity and Surface Roughness of Polystyrene Coating on QCM Sensor, Jurnal Teknologi, 79(3): 61-67 (DOI:))		
	37. (S. Setiawidayat, M.R. Indra, D. Sargowo, S.P. Sakti, 2016, Determining the ECG 1 cycle wave using discrete data, Journal of Theoretical and Applied Information Technology, 88(1): 107-114 (DOI:))		
	38. (S.P. Sakti, et all, 2016, Development of Simple Bacterial Biosensor for Phenol Detection in Water at Medium Concentration using Glass Microelectrode, The Journal of Pure and Applied Chemistry Research (DOI:))		
	39. (A. Sabarudin, S.P. Sakti, et all, 2016, Evaluation of Glycidyl Methacrylate-based Monolith Functionalized with Weak Anion Exchange Moiety inside 0.5 mm i.d. Column for Liquid Chromatographic Separation of DNA, Analytical Chemistry Research (DOI:))		
	40. (S.P. Sakti, et all, 2016, Development of QCM Biosensor with Specific Cow Milk Protein Antibody for Candidate Milk Adulteration Detection, Journal of Sensors (DOI:))		
Activities in specialist bodies over the last 5 years	Organization	Role	Period
	Physics Society of Indonesia	Member	2017 - Now