Physics Department

## Dr. Kurnia Lahna, M.T

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| **Position** | Spectroscopy; Laser Spectroscopy; Optics Thin Film, Optics, Modern Physics, Wave, Thermodynamics; Wave; Electronics and Entrepreneurship Management |

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| **Academic Career** | **Doctorate Course: Doctor of Mathematics and Scientific Applications USK Banda Aceh**<br>**Magister Course**: Faculty of Engineering, University of Indonesia (UI) Jakarta<br>**Bachelor Course**: Physics in University of North Sumatera (USU), Medan |
| **Employment** | Assistant Professor 2015 to present<br>Head of Goal laboratory 2015-2019<br>Head of Dept Physics 2000-2003 |
| **Research and development projects** | - |
| **Collaborations** | Conducting research in the field of laser spectroscopy conducted collaboratively at the Research Center of the Maju Makmur Mandiri Foundation (MMM) Jakarta in researching various natural materials and specifically conducting research on local content in the Aceh region. |
| **Patents and proprietary rights** | - |
| **Selective Publications (last 5 years)** | 1. Mitaphonna, R., Idris, N., Ramli, M., Ismail, N., Kurihara, K., & Lahna, K. (2024). A pulsed carbon dioxide laser-induced breakdown analysis for chemical profile of tsunami-affected soil. *Global Journal of Environmental Science and Management*, *10*(3), 1211-1226.<br>2. Ramli, M., Mitaphonna, R., Kurihara, K., Lahna, K., & Idris, N. (2024, June). Some results from a transversely excited atmospheric carbon dioxide-laser induced breakdown spectroscopy investigation of tsunami deposit cored from Aceh Besar coastal region. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1356, No. 1, p. 012086). IOP Publishing.<br>3. Putri, A., Mitaphonna, R., Lahna, K., & Idris, N. (2024, June). Elemental analysis of “kampong” chicken egg shell content using a Nd-YAG laser induced breakdown spectroscopy. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1356, No. 1, p. 012120). IOP Publishing.<br>4. Fitriyani, S., Safitri, R., Lahna, K., Yusibani, E., & Iswardy, E. (2024, March). Dielectrophoretic force characteristics toward Lactobacillus casei on an oblique-patterned electrode. In *Journal of Physics: Conference Series* (Vol. 2734, No. 1, p. 012004). IOP Publishing.<br>5. LAHNA, K., MITAPHONNA, R., RAMLI, M., ISBAH, F., YUSIBANI, E., FAUZI, F., ... & IDRS, N. (2024). Identification ratio of Si/Ti and Ca/Ti content by X-Ray Fluorescence in tsunami soil samples. *Jurnal Natural*, *24*(1), 35-42. |
| **Membership** | |
| **External Link** | https://fsd.usk.ac.id/muhammadisa/ |