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EDITORIAL

Greetings to the Readers of Jurnal Teknosains!

We are proud to present the latest edition of Jurnal Teknosains in Volume 13, Number 2, June 2024. In a world that is constantly evolving, innovation and sustainable development are crucial foundations for progress in the fields of technology and science. This edition takes us through a series of research articles that highlight various important aspects in this regard, ranging from the development of renewable energy technologies to efforts in addressing global pandemics. In broad strokes, we endeavor to provide an overview of the eight research articles in the field of technology and science published in this June 2024 edition.

The first article discusses the fabrication of thin PbS layers for air mass filter applications in solar simulators. Solar panels have become increasingly important as a source of renewable energy, and the quality testing of solar panels requires tools such as solar simulators. The air mass filter (AMF) is a crucial component in these simulators, and the fabrication of PbS thin films provides a solution to enhance the performance of AMF. The findings of this research contribute significantly to the development of renewable energy technology.

The second scientific article discusses the influence of temperature and pigment coating ratio on the corrosion rate of SS400 steel, highlighting the importance of protecting construction materials from corrosion. Steel corrosion protection is crucial in the construction industry, especially in shipbuilding. This research provides a better understanding of the use of aluminum-graphite pigments and heat treatment in improving the corrosion resistance of steel coatings.

The third article explores the kinetics and combustion characteristics of palm oil empty fruit bunch biochar. The utilization of renewable energy from biomass is the main focus of this research. Through thermogravimetric analysis, this research provides deep insights into the potential of palm oil empty fruit bunch biochar as an alternative renewable energy source.

The fourth article discusses the development of integrated microcontroller MQ sensor for biogas monitoring. Using microcontroller technology, this research produces effective sensors for monitoring methane and hydrogen sulfide gas concentrations in biogas. These findings have important implications for the development of more efficient and accurate biogas monitoring systems.

The fifth article discusses the purification of cooking oil using activated carbon from coconut shell and zeolite. This article demonstrates efforts to improve the quality and safety of everyday consumer products. By utilizing existing natural resources, this research presents a sustainable solution to address environmental and public health issues. In an effort to improve the quality of cooking oil, this research uses natural adsorbents to purify bulk and used cooking oil. The results of this research provide sustainable solutions for managing cooking oil waste.

The sixth article discusses kinetic optimization in the extraction of red yeast rice – red ginger and its impact on antioxidant activity. This herbal combination has the potential as an antioxidant, and this research demonstrates the importance of kinetic optimization in improving the efficiency of extraction and the antioxidant activity produced.

Furthermore, the article on the development of innovation ecosystem models in handling COVID-19 in Indonesia highlights the importance of cross-sector collaboration in addressing global health challenges. Through technological innovation, such as the MBSL2 mobile laboratory, Indonesia has demonstrated its ability to effectively and efficiently respond to the pandemic. Through TFRIC-19, a mobile laboratory has been developed to support efforts in handling the COVID-19 pandemic. This research illustrates the importance of collaboration among actors in addressing global health challenges.

The last article discusses the comparison of physical testing and acceptability in the use of extra oral suction at RSGM UGM Prof. Soedomo. Focusing on COVID-19 management in dentistry, this research provides insights into the effectiveness of using extra oral suction devices in reducing aerosol exposure. By examining the effectiveness and acceptability of EOS use, this research provides a comprehensive view of the use of new technology in dental practice.

From the eight articles in the June 2024 edition, we can see the diversity and complexity of the research conducted by authors from different backgrounds and disciplines in an effort to improve our understanding of the world we live in and address the challenges faced by the Indonesian society. By continuing to promote research and interdisciplinary collaboration, we can build a brighter and more sustainable future for the next generations.

Thank you to the researchers, contributors, and readers who have played a role in realizing the June 2024 edition. May the knowledge gained from these articles contribute meaningfully to the advancement of science and technology. Happy reading, and may this edition be beneficial to the readers.

Regards,
Editor-in-Chief Jurnal Teknosains

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EXPRESSION OF GRATITUDE

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