



Table of contents

Editorial	i
Table of contents	iii
1. Effect of oxidation and dilution of B30 palm oil biodiesel in pentaerythritol ester as engine bio-lubricant Muhammad Faidah Amminuddin, Nurin Wahidah Mohd Zulkifli, Mahmoud Z. Ibrahim	1
2. Friction and wear characteristics of palm mid olein base stock with Tertiary Butyl-Hydroquinone and Ethylene Vinyl Acetate as bio-based lubricant Zulhanafi Paiman, Syahrullail Samion, Muhammad Noor Afiq Witri Muhammad Yazid, Zuraidah Rasep	10
3. Analysis of the marine engine oils elemental constituents for engine diagnostics Nikolay Sinyavsky, Natalia Kostrikova	24
4. Impact of the taper die's indentation towards the extrusion process frictional behavior in various palm oil-based lubricant type influence Wan Mohammad Aiman Wan Yahaya, Syahrullail Samion, Nurul Aini Mohd Ahyan, Ummikalsom Abidin	36
5. Enhancing the physical and tribological characteristics of modified jatropha oil via the incorporation of hybrid nanoparticle additives Ainaa M. Sabri, Norfazillah Talib, Amiril Sahab Abdul Sani, Zubaidah Zamri, Kamaruddin Kamdani, Sandip Kunar, Haslina Abdullah	49
6. Optimization of finger seal pad design for reducing the leakage between the high-pressure and low-pressure region Rajesh, P., Sharana Basavaraja, J.	68
7. The tribological performance identification of a tire tread block during friction contact: A numerical investigation Budi Setiyana, M. Muchammad, Mohammad Tauviqirrahman, J. Jamari, Eko Saputra	81
8. Determination of the criteria for the transition of the tribosystem to disastrous wear Tareq M. A. Al-Quraan, Oksana Mikosianchyk, Vitalii Tokaruk, Rudolf Mnatsakanov, Olena Kharchenko, Sergii Kharchenko	93

9.	Investigation of surface roughness Inconel 718 in waterjet turning W. Noor Fatimah W. Mohamad, Mohd Shahir Kasim, Rodianah Alias, Raja Izamshah Raja Abdullah, Saiful Bahri Mohamed	113
10.	Effect of micro-milling parameters on burr formation and surface roughness in aluminum microchannels puncher Mohd Saifuldin Mohd Mokhtar, Ahmad Razlan Yusoff	129
11.	Effect of anodizing voltage on surface and physical properties of CNTs incorporated aluminium oxide films Aflah A Aziz, Md Shuhazly Mamat, Mohd Mustafa Awang Kechik, Kar Fei Chan, Muhammad Izzat Muktar, Noor Ayuma Mat Tahir, Shahira Liza Kamis, Yazid Yaakob	144
12.	Effect of dry and MQL cutting condition on coated carbide cutting tool during the end milling of Ti-6Al-4V titanium alloy Aiman Nazrin Noor Ismail, Siti Haryani Tomadi, Nor Farah Huda Abd Halim, Mas Ayu Hassan, Rosdi Daud	162
13.	Analysis of surface damage characteristics and scuffing prediction in the presence of ZDDP additive and running-in process Jeng-Haur Horng, Thi-Na Ta, Yue-Syun Wu	177
14.	Analytical and computational sliding wear prediction of ultrahigh molecular weight polyethylene UHMWPE in block-on-ring (BOR) tribometer Hussin M.S., Hamat S., Kelly P.A., Fernandez J. W., Ramezani M., Pranesh K.	192
15.	Optimization of friction surfaces through mathematical modelling of the flow of lubricants Oleg Kuzmin, Rinat Sharapov, Irina Petunina, Natalya Kuzina	215