





an Open Access Journal by MDPI

Minimum Quantity Lubrication: Environmental Alternatives in Processing, 2nd Edition

Guest Editors:

Dr. Abdelkrem Eltaggaz

School of Engineering, University of Guelph, Guelph, ON N1G 2W1, Canada

Prof. Dr. Ibrahim Deiab

School of Engineering, University of Guelph, Guelph, ON N1G 2W1, Canada

Deadline for manuscript submissions:

31 March 2025

Message from the Guest Editors

Manufacturers can create an environmentally friendly and more efficient manufacturing process that aligns with various sustainability goals, such as climate action and life on land, by using use Minimum Quantity Lubrication (MQL). The MQL process involves applying minimal amounts of lubricant directly to the cutting zone rather than flooding the workpiece with a large amount of lubricant. By using this technique, there is a significant reduction in the overall consumption of lubricants, which reduces the impact on the environment and minimizes waste production.

This Special Issue examines the innovative potential of MQL, an advanced technique that has the potential to significantly reduce lubricant consumption while maintaining optimal efficiency. When MQL is used, industries will be able to reduce their environmental impact, generate less waste, and release less volatile organic compounds into the atmosphere in comparison to traditional machining fluids.

This Special Issue will present a collection of articles that will emphasize MQL's role in promoting sustainability within the metalworking industry, aligning it with global efforts to adopt greener manufacturing practices.



