# Article information:

An insight into polishing slurry for high quality and efficiency polishing of diamond - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0301679X22003620>

# Article summary:

1. A new polishing slurry is provided based on Fenton reaction for the high quality and efficient CMP of diamond.

2. The SEM results show that the snowflake oxide layer appears on the diamond surface after corrosion, and a sub-nanometer morphology and remove rate of 752 nm/h are obtained after CMP.

3. Common oxidants such as K2FeO4, KMnO4, Na2MoO4, K2Cr2O7, CrO3, KIO4, H2O2, (NH4)2S2O8, Fe(NO3)3, oxalic acid (C2H2O4), sodium thiosulfate (Na2S2O3), molten LiNO3 and KNO3 have been used as polishing slurry in the CMP process of diamond.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article provides an insight into polishing slurry for high quality and efficiency polishing of diamond. The article is well written and provides a comprehensive overview of the topic with relevant information about common oxidants used in chemical mechanical polishing (CMP). It also presents a new polishing slurry based on Fenton reaction which can be used to achieve high quality and efficient removal of diamond surfaces.

The article is generally reliable as it provides evidence from previous studies to support its claims. However, there are some potential biases that should be noted. For example, the article does not explore any counterarguments or alternative solutions to the problem presented in the article. Additionally, it does not provide any information about possible risks associated with using this new polishing slurry or how it compares to other methods of CMP for diamond surfaces. Furthermore, there is no discussion about how this new method could be improved upon or what further research needs to be done in order to make it more effective or efficient.

In conclusion, this article provides an insightful overview of polishing slurry for high quality and efficiency polishing of diamond but could benefit from further exploration into potential risks associated with using this method as well as alternative solutions or improvements that could be made to increase its effectiveness or efficiency.

# Topics for further research:

* Alternative solutions for CMP of diamond surfaces
* Risks associated with Fenton reaction polishing slurry
* Comparison of CMP methods for diamond surfaces
* Improvements to Fenton reaction polishing slurry
* Research on CMP of diamond surfaces
* Optimization of CMP for diamond surfaces

# Report location:

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