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| Book Name: | [**Science and Technology: Developments and Applications**](https://www.bookpi.org/bookstore/product/science-and-technology-developments-and-applications-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4471** |
| Title of the Manuscript:  | **Polarized Phase Holograms** |
| Type of the Article | **Book Chapter** |

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| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | **The research focuses on analyzing the effects of exposure time, processing chemical composition, and objective beam polarization on phase holograms, which help to imropve hologram quality, diffraction efficiency, and image reconstruction accuracy. Enhancing diffraction efficiency leads to clearer and more accurate holographic images and understanding the influence of exposure time help refine hologram production for better reliability for real-world applications.** |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **Since the title is broad and the study focuses on specific parameters, I suggest refining it to better reflect the key aspects of the research:**1. **Effects of Processing Conditions and Beam Polarization on Phase Hologram Performance**
2. **Investigating Key Parameters For Enhancing Diffraction Efficiency In Optimizing Phase Holograms**
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| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **The abstract is well-structured and effectively highlights the key aspects of the study.** |  |
| **Is the manuscript scientifically, correct? Please write here.**  | **Yes** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | **Yes** |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes it is acceptable for academic level. |  |
| Optional/General comments | The manuscript contains inconsistent citation formats. For example, a numbered citation style is used on Page 2, whereas the author-date style appears from Page 3 onward. Please ensure consistency by using either the numbered or author-date format throughout the manuscript. Additionally, update the references accordingly. It is strongly recommended to use citation management software to maintain consistency rather than revising them manually. Page 3, last paragraph: A schematic diagram illustrating the reference beam propagation in an angular direction should be included to support your experimental set up and the statement. The schematic diagram in Fig. 1 is insufficient for this study and lacks clear illustration. Authors must provide a larger and higher-quality representation of the experimental setup. Avoid abbreviations in the experimental layout—use full terms instead. Additionally: - Ensure the schematic is enlarged and presented in high quality. - Separate mirrors and beam splitters from other objects to enhance clarity. Use different colors or thicker lines to differentiate them. - Apply the same improvements to Fig. 3. Figure 4 should be presented in better quality. Authors should include - Photographs of the hologram image of the object, and bject coin seen through the device, Photographs of the hologram image of the coin’s head before and after recording. Please provide diffraction pattern obtained by laser. Please include the relevant details.The quality of Figures 5 and 6 is poor—please enhance clarity and resolution. Use better fonts for readability. Keep captions brief; detailed descriptions should be included in the main text. Page 12: The sentence “To further verify the results…” refers to Fig. 6(b), which does not exist. This should be corrected to Fig. 7(b). Figure 7 (a) and (b) should be enhanced for better clarity and readability. Please reflect all changes in the discussion and conclusion sections accordingly.  |  |

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| **PART 2:**  |
|  | **Reviewer’s comment** | **Author’s comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

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| **Reviewer Details:** |
| Name: | **Samira Gholizadeh** |
| Department, University & Country | **University of Cape Town, South Africa** |