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| Book Name: | [Engineering Research: Perspectives on Recent Advances](https://www.bookpi.org/bookstore/product/engineering-research-perspectives-on-recent-advances-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4531** |
| Title of the Manuscript:  | **Design of a Novel Robotic Fish Structure Utilizing PVC Gel Actuators** |
| 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.** | **This manuscript contributes to the field of biomimetic robotics by presenting a novel robotic fish structure that utilizes PVC gel actuators for propulsion. The study is valuable for researchers working on underwater robotics, particularly in applications such as environmental monitoring, surveillance, and exploration. The integration of soft actuators enhances flexibility and maneuverability, which is crucial for navigating complex underwater environments. Additionally, this work advances the understanding of bioinspired propulsion mechanisms, potentially influencing future designs of underwater robotic systems.** |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **The current title, "Design of a Novel Robotic Fish Structure Utilizing PVC Gel Actuators," is informative but could be refined for clarity and impact. A more precise title could be:****"Development of a Bio-Inspired Robotic Fish with PVC Gel Actuators for Enhanced Underwater Locomotion"**  |  |
| 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 provides an overview of the research but could be made clearer and more structured. Suggested improvements:*** **The phrase "it has been designed" should be revised for clarity to "A bionic robotic fish has been designed".**
* **Some sentences are fragmented and could be rewritten to improve readability. For instance, "It’s a fast and smooth operation and can swim" can be rewritten as "The robotic fish exhibits fast and smooth swimming capabilities."**
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| **Is the manuscript scientifically, correct? Please write here.**  | **The manuscript is scientifically grounded and presents a well-structured analysis of the robotic fish design. However, some areas require further clarification:*** **The mechanism of actuation should be explained in more depth, including how PVC gel actuators function compared to other actuators like SMA or IPMC.**
* **The oscillating mechanism could benefit from additional discussion regarding its energy efficiency and how it compares to real fish propulsion.**
* **The 55.52° angle mentioned in the fish structure should be justified with supporting experimental or theoretical data.**
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| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | 1. **The references are relevant, but some are relatively old (before 2020). Including more recent studies on biomimetic robotics and PVC gel actuators would improve the manuscript.**
2. **Some references are not directly cited in critical sections where background information is provided. Proper in-text citation should be ensured.**
3. **Consider including additional references related to soft robotics advancements and bioinspired locomotion models to strengthen the discussion.**
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| Is the language/English quality of the article suitable for scholarly communications? | The manuscript contains **several grammatical errors and awkward sentence structures**. Some key observations:* **Verb tense inconsistencies** (e.g., past vs. present tense).
* Some sentences are **too long or fragmented**, making them difficult to read.
* **Technical phrasing** should be more precise to maintain scholarly clarity.
* Proofreading by a native English speaker or language editing service is recommended.
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| Optional/General comments |  |  |

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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)* |  |

**Reviewer details:**

**Priyanka Das, USA**