

Results and Discussion

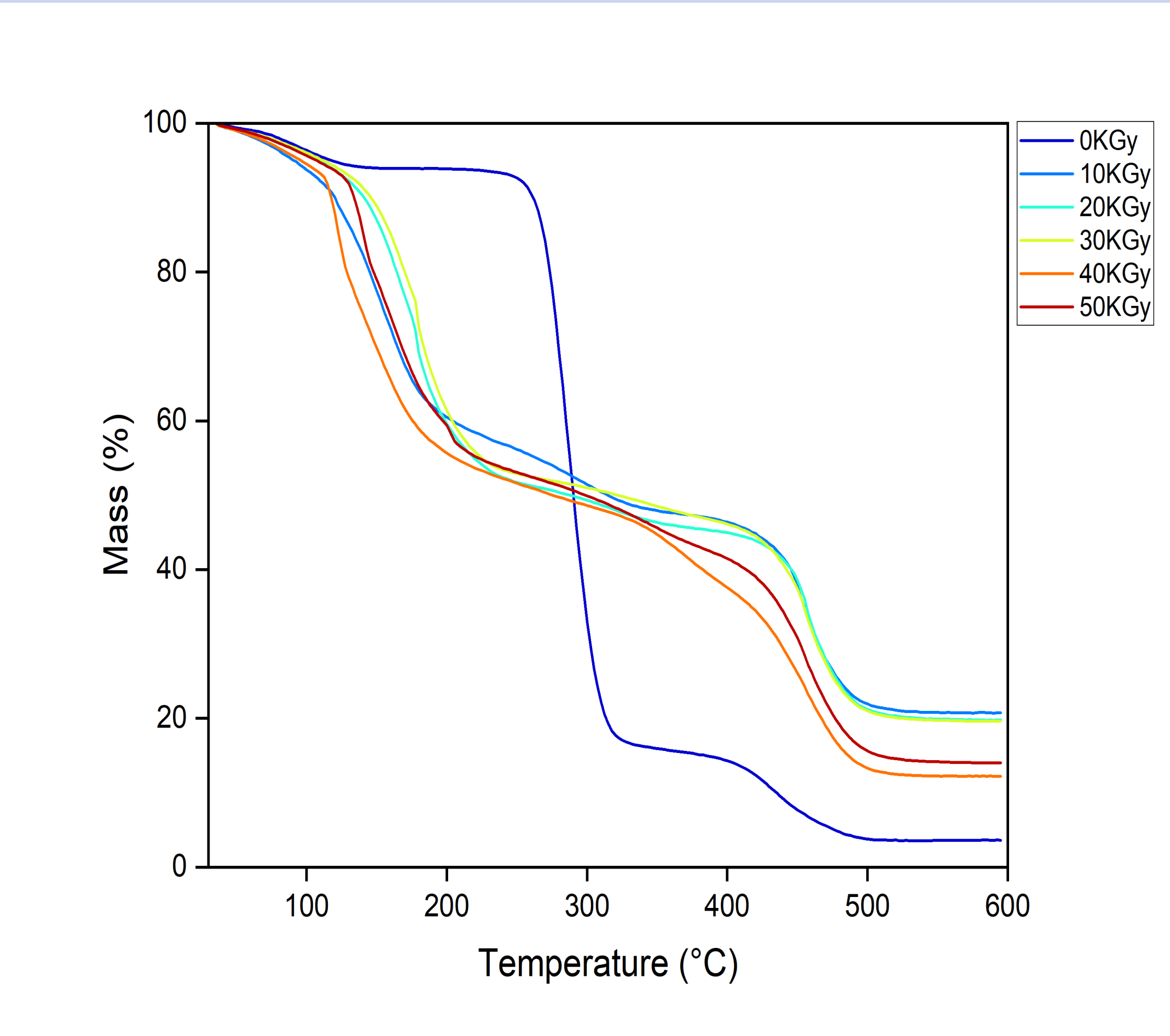


Fig 2. TGA analysis of 6 PVA aerogels

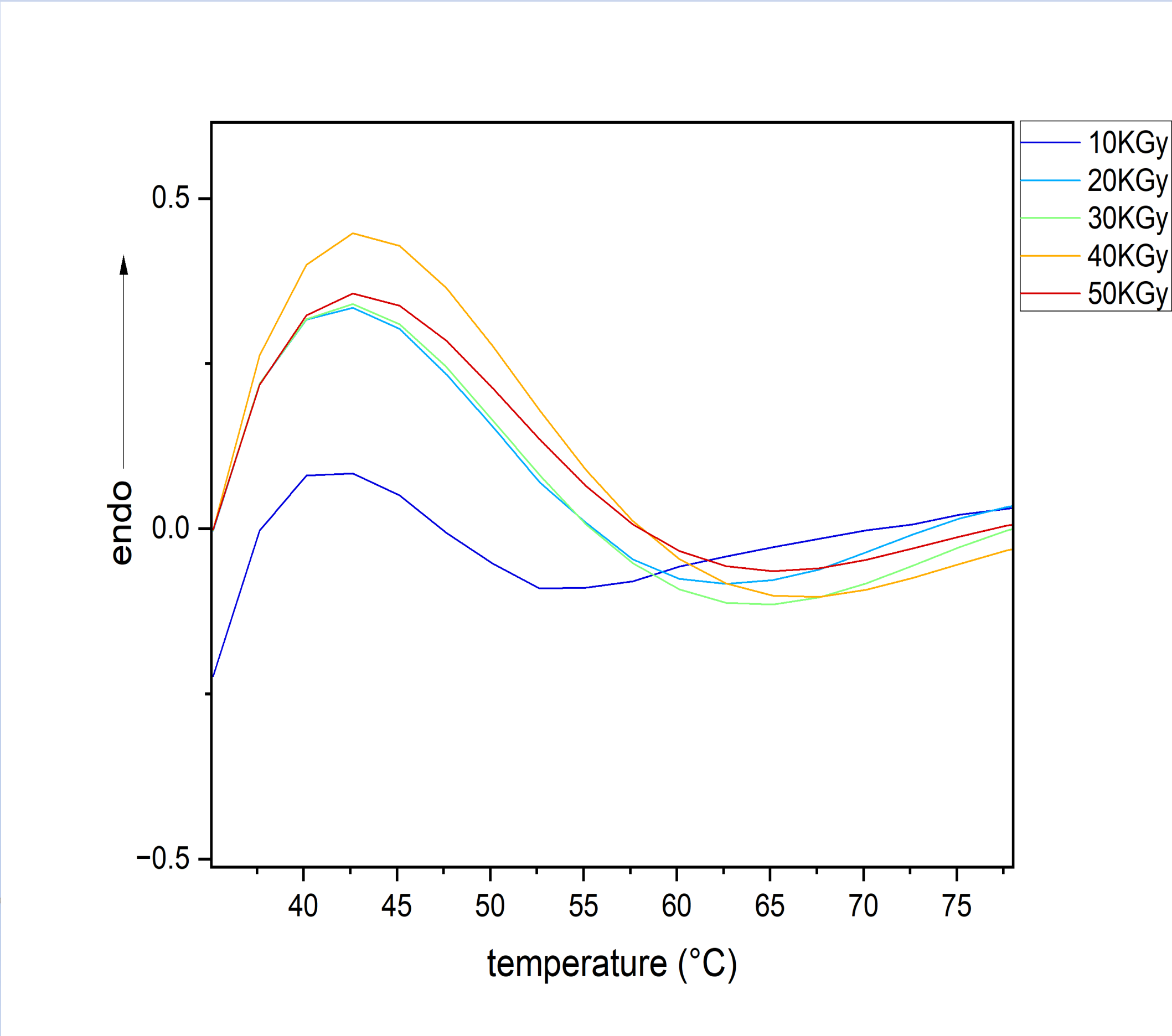


Fig 3. Tg analysis of 6 PVA aerogels

Conclusions

The PVA aerogel was successfully fabricated by using gamma radiation and enhanced hydrophobicity with CVD technique. The thermal result indicate property of PVA aerogel was improved. The PVA aerogel can be utilize for further extent especially in water remediation. The exploration of radiation energy can be conducted for new finding of green polymer and energy.

Introduction

PVA is one of the known biocompatibility water-soluble and hydrophilic polymer which is widely used in many application from an industrial view point. The effectiveness of PVA are usually improved by adding crosslinker and silane derivatives product but it comes along with several environmental implications. The potential of gamma irradiation as a source of crosslinker for development of PVA aerogel was determined. The hydrophobicity of PVA aerogel was developed by applying Chemical Vapor Deposition (CVD) technique. The property of PVA aerogel was examined. This work was successfully prepared PVA aerogel as an eco-environment approach towards a sustainable development.

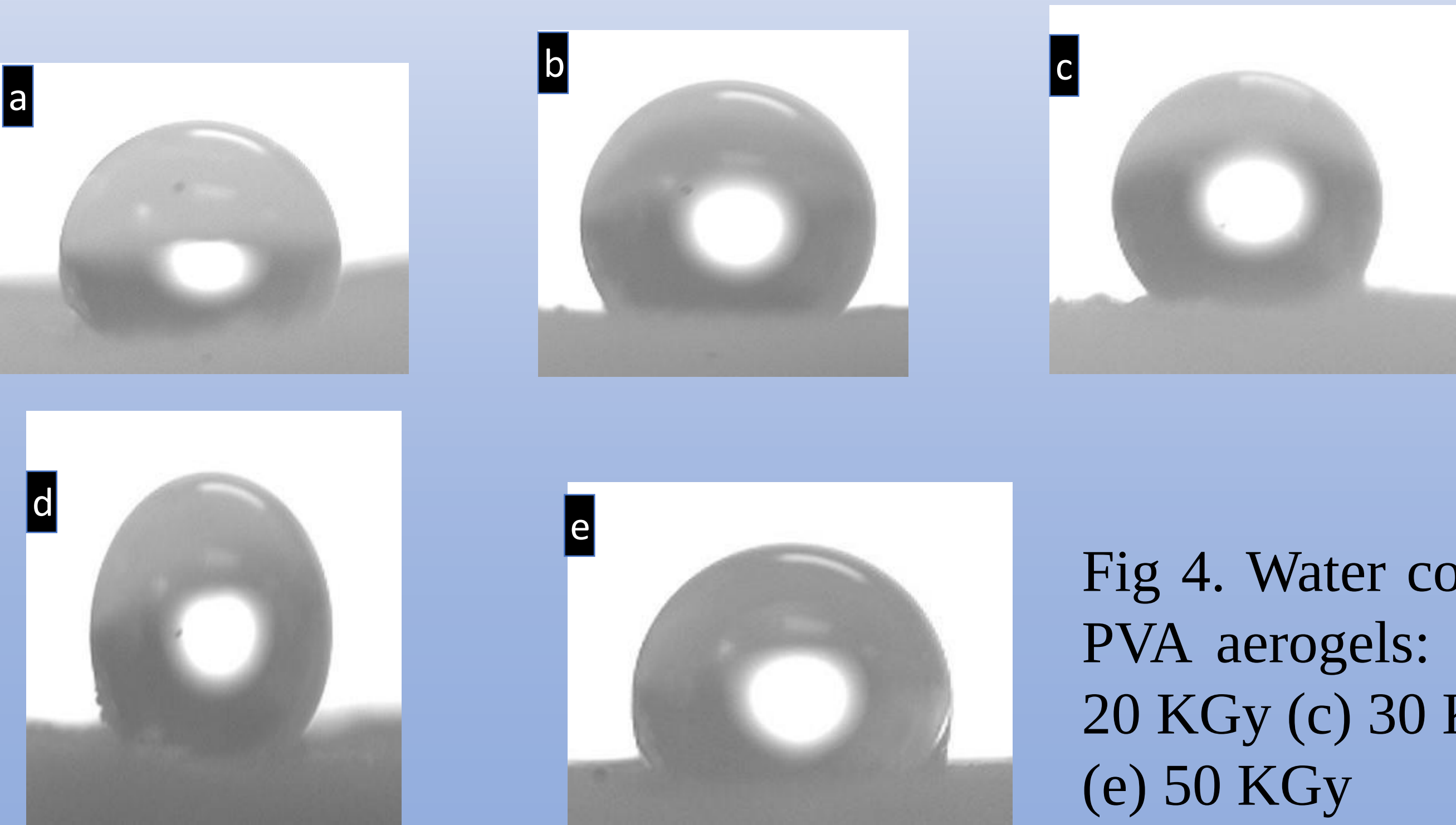


Fig 4. Water contact angle of 5 PVA aerogels: (a) 10 KGy (b) 20 KGy (c) 30 KGy (d) 40 KGy (e) 50 KGy

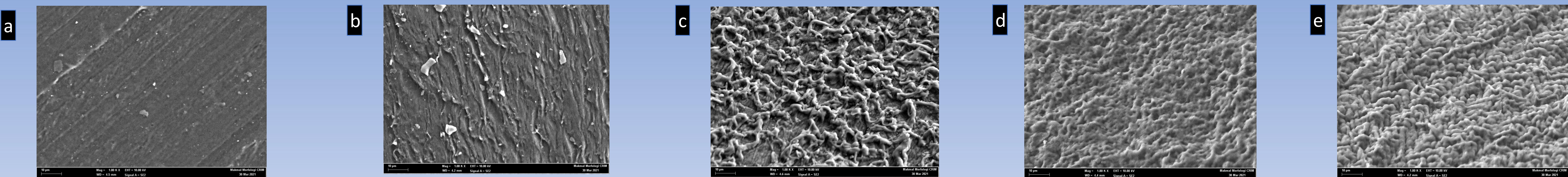


Fig 5. Morphology of 5 PVA aerogels in SEM: (a) 10 KGy (b) 20 KGy (c) 30 KGy (d) 40 KGy (e) 50 KGy

Acknowledgments

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References

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Methodology

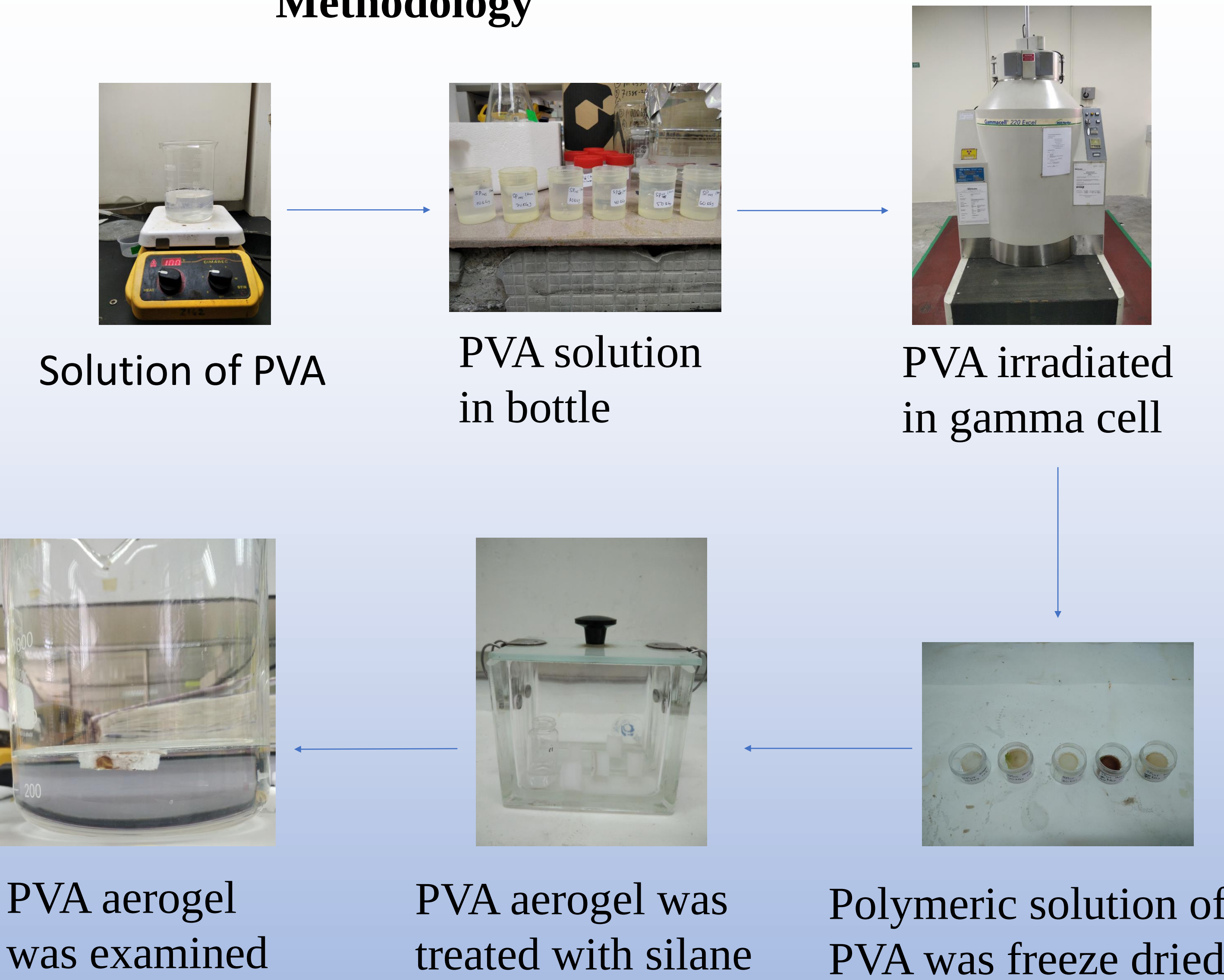


Fig 1. Preparation of PVA aerogel with CVD