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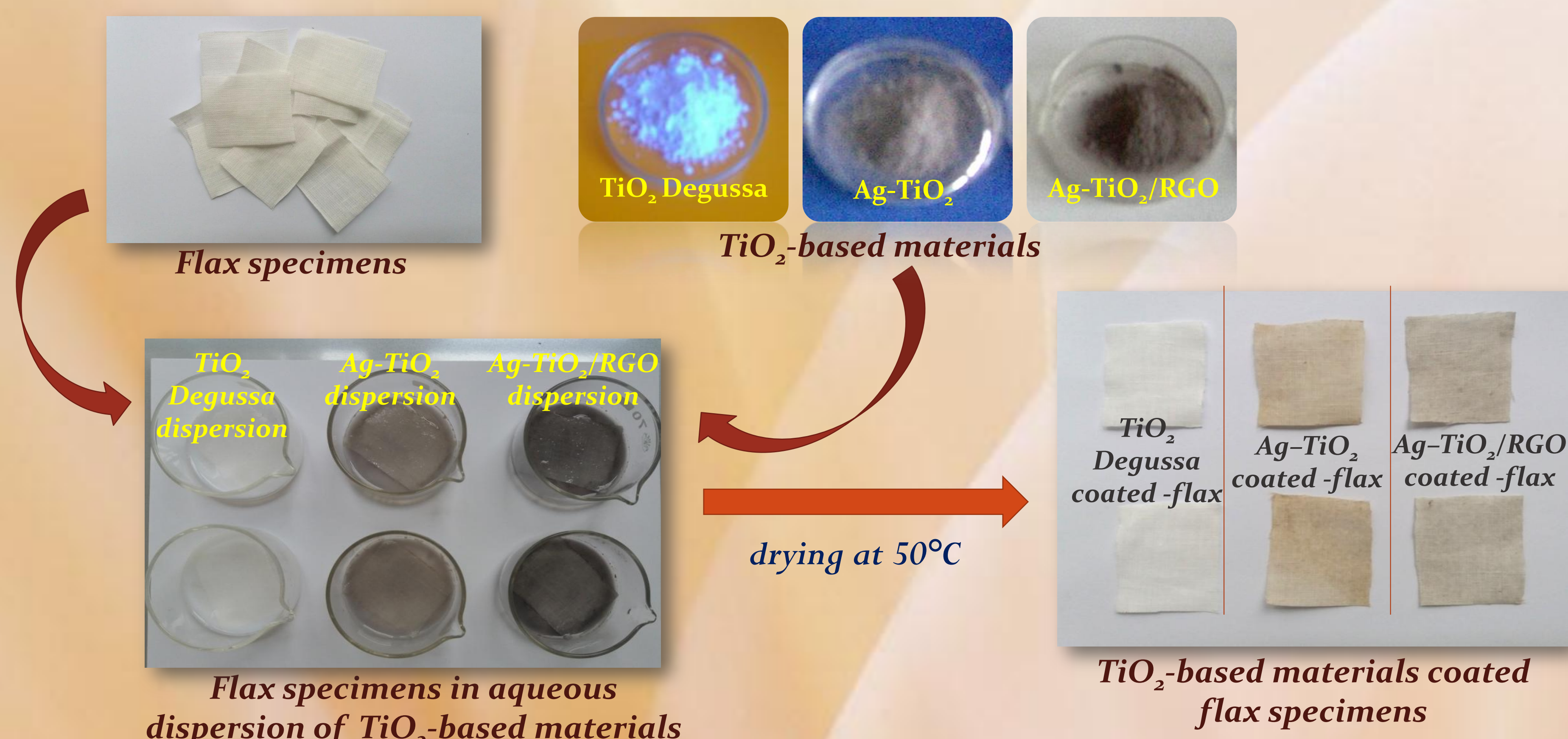
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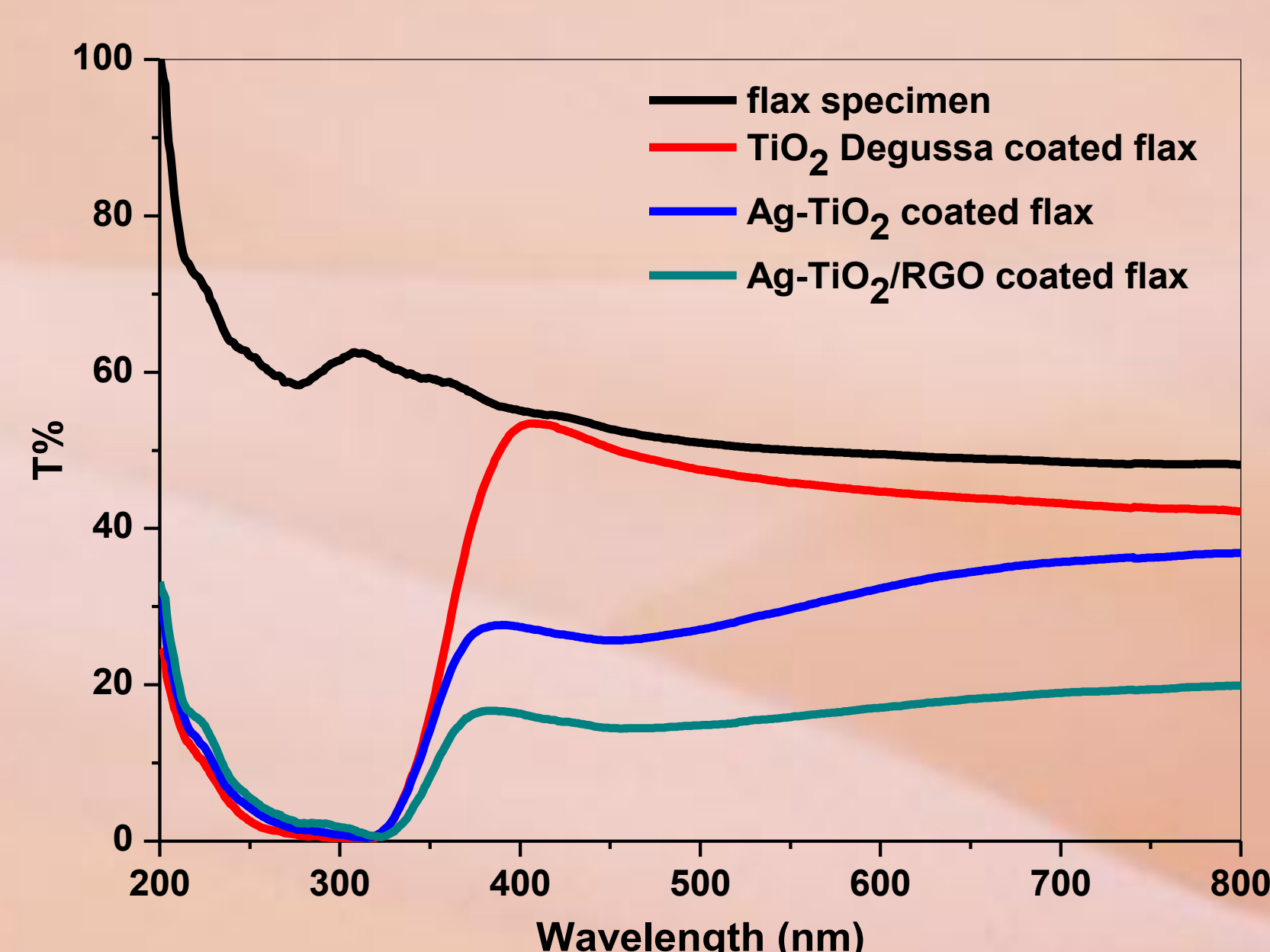
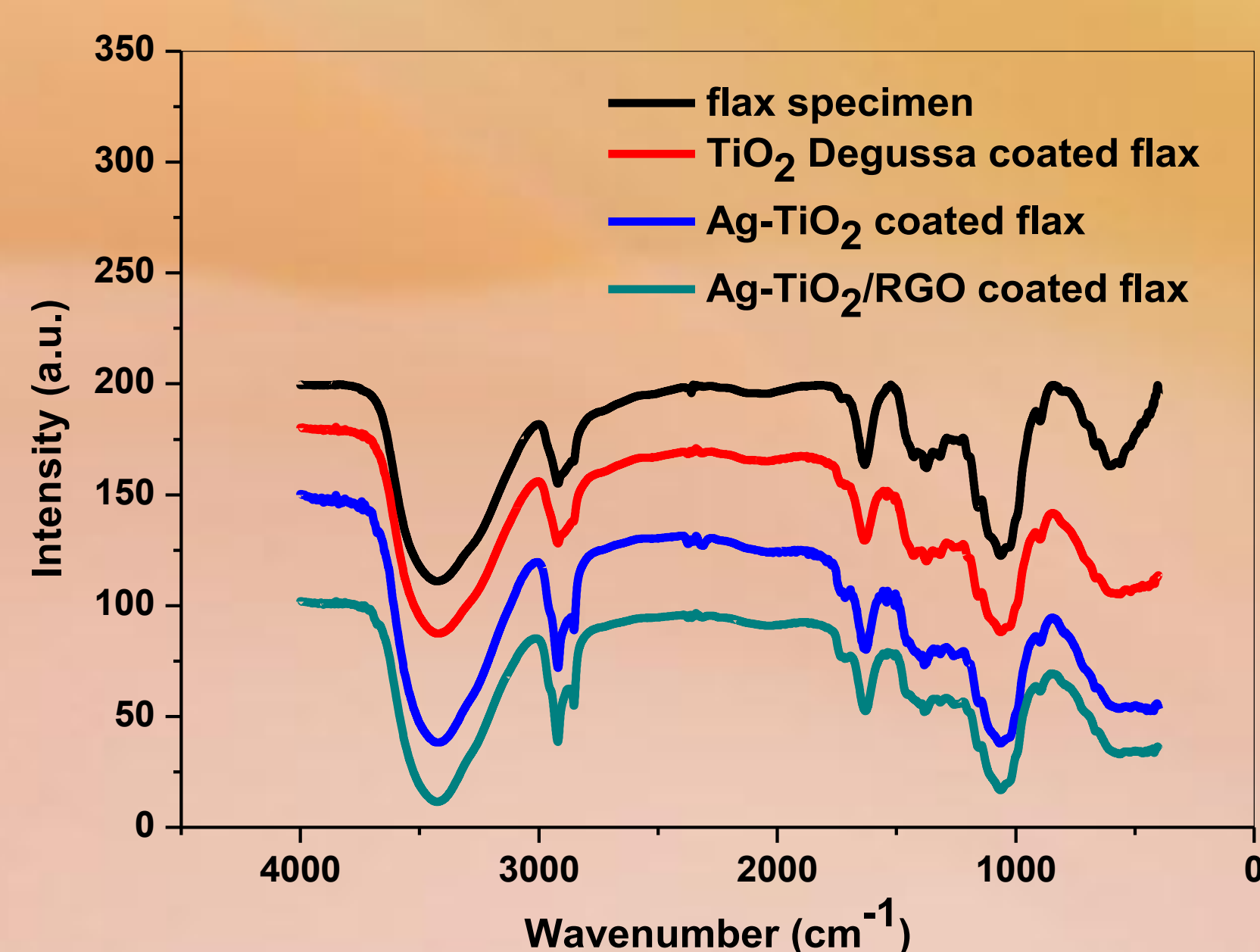
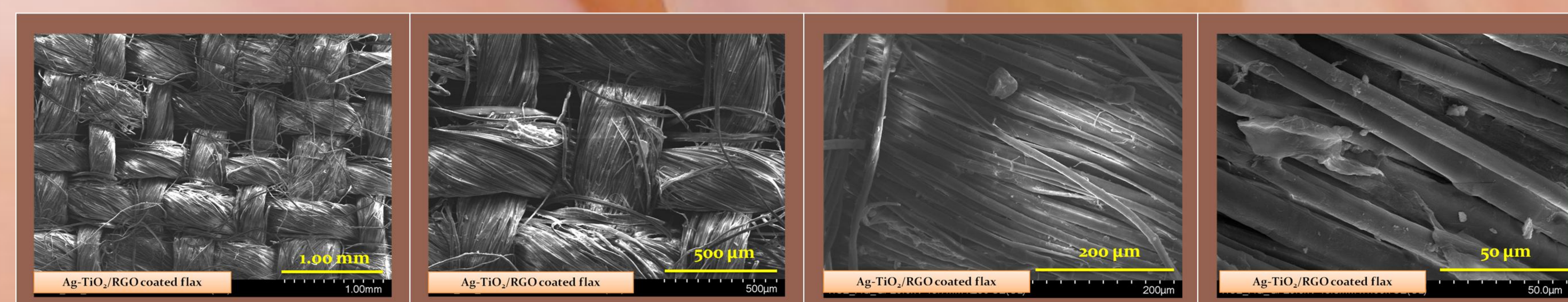
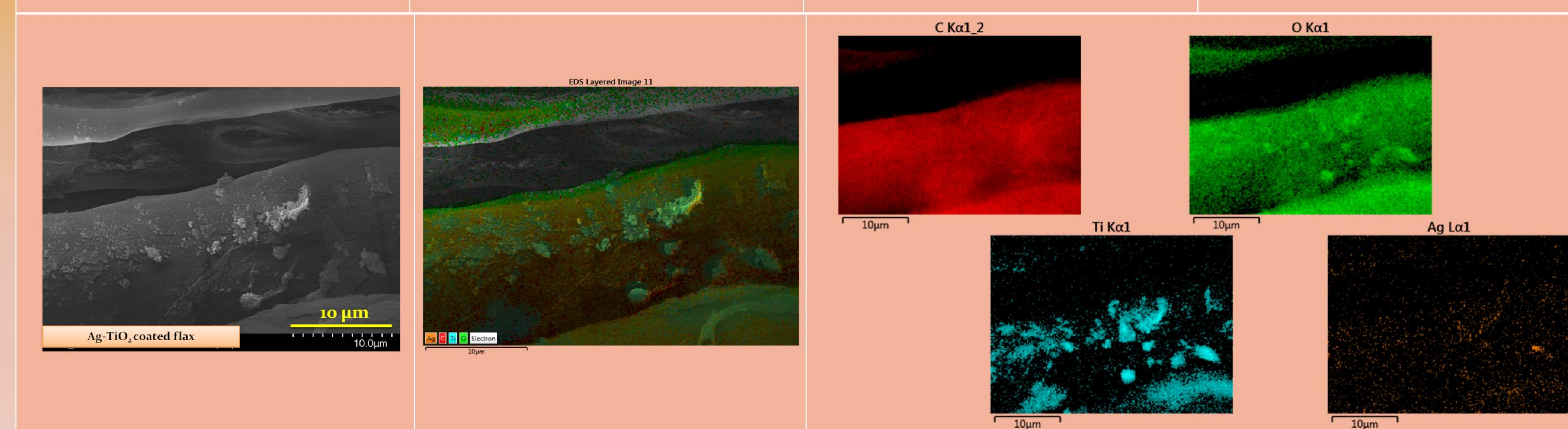
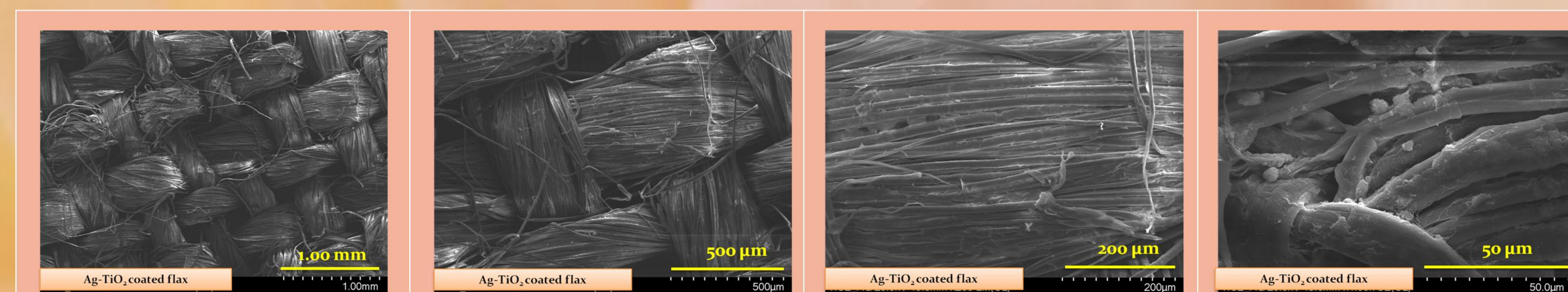
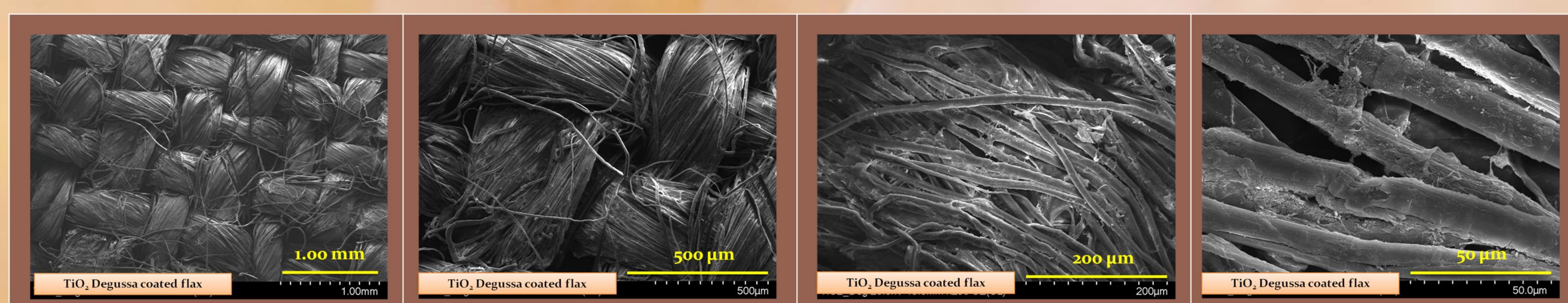
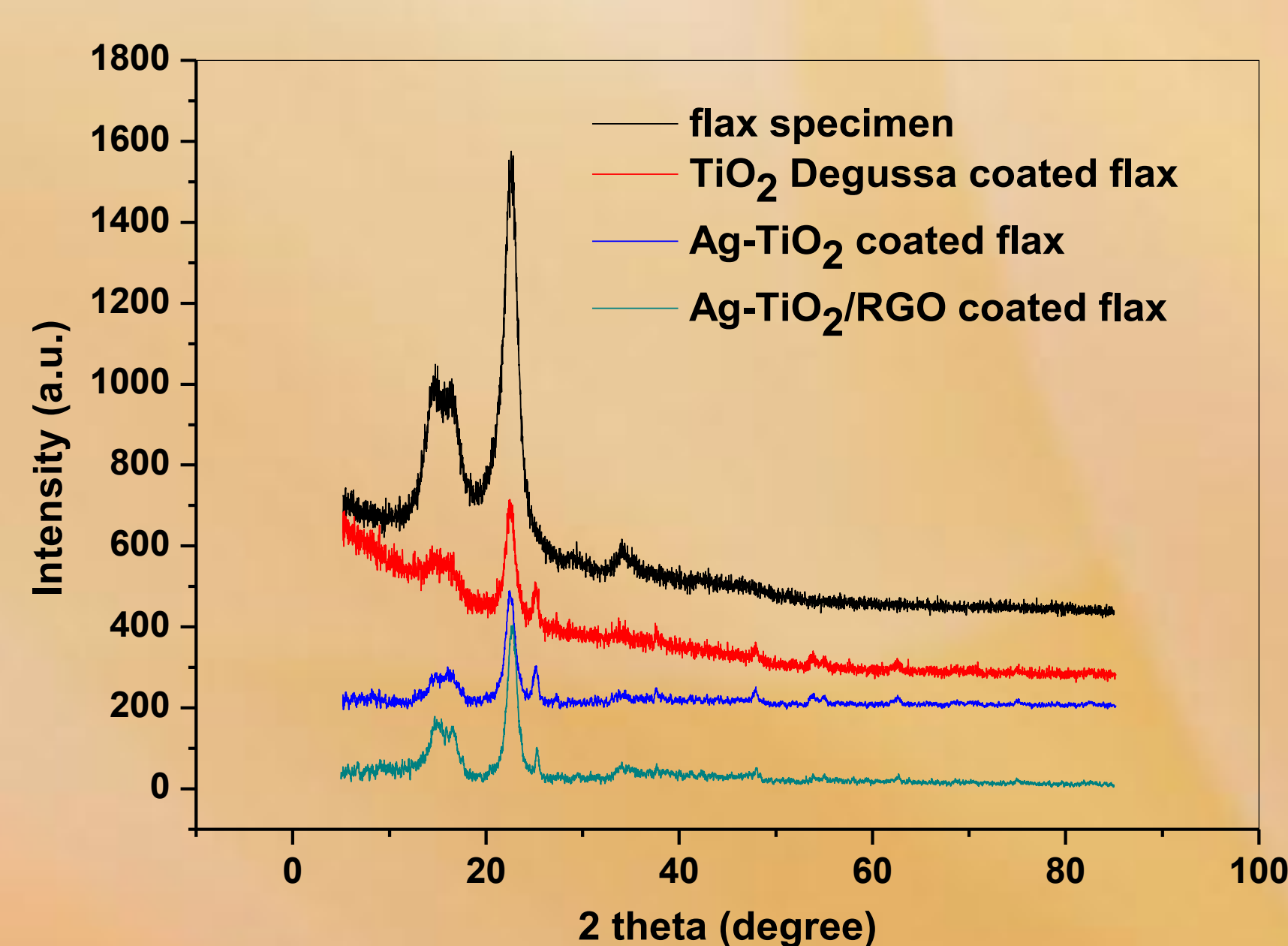
INTRODUCTION

Silver (Ag) and TiO₂ nanoparticles show enhanced antimicrobial and photocatalytic activities and they are used in UV protection, self-cleaning, textile or water treatment applications. Graphene derivatives, such as graphene oxide (GO), reduced graphene oxide (RGO) attract ever-increasing interests in various fields, such as nanoelectronics, sensors, catalysis, biomedicine etc. due to their unique characteristics (high specific surface area, excellent mechanical properties and electrical conductivity, thermal stability, biocompatibility).

MATERIALS



EXPERIMENTAL RESULTS



CONCLUSION

Flax fabric specimens were loaded with Ag-TiO₂/reduced graphene oxide using a simple dipping coating method. The data obtained using XRD, FTIR techniques and SEM images proved the presence of prepared nanocomposites on the surface of the treated flax specimens. Experimental results indicated an improvement in the UV absorbing activity of the Ag-TiO₂/reduced graphene oxide of modified flax fabrics. This strategy is expected to be applied on various textile structures to promote them as multifunctional textile materials for consumers or industrial use due to the huge potential of TiO₂ nanoparticles, silver and graphene-like materials for imparting antibacterial, self-cleaning and UV-protective properties.

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