

## Reusability of nanocomposite materials on the degradation of water pollutants

POSTER

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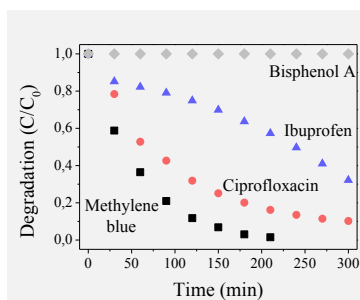


Fig.1: Photocatalytic degradation of several pollutants by the produced nanomaterials, after 4 uses.

Water pollutants are a public health concern enforcing the development of more efficient treatment technologies. Therefore, photocatalytic materials have been developed for water remediation. Immobilized photocatalysts show ease recovery and great potential for reutilization and polymers are good supports as they are inert, mechanically stable and highly durable. In this work, TiO<sub>2</sub> was immobilized in PVDF-TrFE and the photocatalytic performance of the nanocomposites assessed on the degradation of methylene blue, ciprofloxacin, ibuprofen and bisphenol A. The produced nanocomposites exhibited a highly porous structure and the addition of TiO<sub>2</sub> increased their hydrophilicity. The chemical structure of the membranes was kept intact after four uses (20 h) under UV. Overall, no efficiency loss was observed which makes these nanocomposites a cost-effective material for environmental remediation.