

The functionalization of a paper mill sludge-based activated carbon (AC) was addressed in this work for the first time. The produced AC were tested for the removal of six pharmaceuticals – carbamazepine (CBZ), lorazepam (LOR), sulfamethoxazole (SMX), piroxicam (PIR), paroxetine (PAR), and venlafaxine (VEN) – from different matrices (ultrapure water, ultrapure water with pH adjusted to 7.6, and effluent from a municipal wastewater treatment plant (WWTP)). The materials were characterized showing that the functionalization was succeeded, with a reduction of the specific surface area (SBET), except for AC-MPTMS.