

In order to respond to the current limitations and challenges in remediating groundwater and sediment contaminated with polychlorinated biphenyls (PCBs), we have recently developed a new strategy, integration of the physical adsorption of PCBs with their electrochemical dechlorination by introducing activated carbon (AC) impregnated with iron/palladium (Fe/Pd) bimetallic nanoparticles (reactive AC or RAC). Since the synthesis and environmental application of the RAC system are now in its infant period, detailed research studies have been followed before its scale up and ultimately field application. In this study, we address various aspects of the RAC system treating aqueous phase PCBs and PCBs-contaminated sediment.