method for eliminating this major drawback, we found that TiO_2 particles affixed to the surface of polypropylene films can be conveniently utilized to extract metal ions such as Pb^{2+}, Hg^{2+}, Ag^{+}, Bi^{3+} and Cu^{2+} in the presence of citric acid which acts as a sacrificial and complexing agent. In this method, TiO_2 coated polypropylene films immersed just below the surface of the solution are exposed to sunlight. As an example, photoextraction of lead from aqueous solution was carried out and an initial concentration of 80 ppm of Pb in the solution was almost completely removed from solution after 3 h exposure. This investigation demonstrates that lead in contaminated water can be removed by solar irradiation in the presence of the catalyst coated film.