# SURFACE MODIFICATION OF ALUMINIUM OXIDE (Al2O3) NANOPARTICLES ON DETECTION OF CRUDE OIL PRODUCTION

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**ABSTRACT:**

In these past decades, there have been an extensively developed in using metal oxide nanoparticles (NP)s. There are so many applications of these NPs nowadays such as, catalysts, sensors, semiconductors, medical science [1], capacitors and also batteries [2]. Among all the metal oxide NPs existed, Aluminium oxide are one of the common NPs that had been known for several centuries [3]. Waterflooding is one of the techniques to recover oil but increasing in water injection could lead to water breakthrough which will decreased the oil production [4].

***Keywords:*** nanoparticles; surface modification; metal oxides nanoparticles; oil recovery