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Quantum sensor for petroleum detection

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Abstract

Searchin for petroleum oil is a costly process, and a lengthy operation. This conventional process, in addition to be cumbersome, it poses environmental problems. Therefore, it is imperative to develop a cost-effective technology to detect petroleum oil in the field. So, we developed a novel quantum petroleum sensor, as described herein. The quantum petroleum sensor detects petroleum oil in 30 seconds by using one gram of soil sample. The technology is also versatile, since it is able to identify the types of petroleum grades. .The scientific base of the technology is the integration of physical device with the biochemical properties of the petroleum oil. Presence and types of petroleum oil are identified by fluorescence quanta, and through an electrical transducer the fluorescent quantum energy is converted tto digital response, which consequently is integrated by a set of software. The denoted technology eliminates the problems of the existing exploration technologies described above. In addition, this technology is able to identify other components of the petroleum oil.