

Quantum sensor for petroleum detection

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The quantum petroleum sensor represents a good example of integrative biology, since it combines the interaction between the biochemical molecules of the petroleum with the physics base principle of the sensor.

The quantum petroleum sensor detects petroleum oil in 30 seconds with one gram of soil, and also determining the type of petroleum, this is the first quantum sensor for detecting petroleum in the world.

The methods and systems use the fluorescence produced by one or more transition metals present in the oil to detect and determine the presence and grade of the oil in the sample. The fluorescence produced by the metals is also useful as marker for tracking presence oil in the soil. The methods offset the problems of the existing exploration technologies described above. Additionally, the methods and systems can be useful in identifying other compounds related to petroleum oil, such as carbon, hydrogen, and other types of aromatic compounds.

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