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(54) **Standoff explosives detector using deep-uv raman spectroscopy**

(57) A method of performing Raman spectroscopy, and an apparatus for performing the method, including irradiating, with laser light, a trace amount of a target substance disposed on a painted surface, receiving reflected laser light and a Raman return signal from the trace amount of the target substance, processing the Raman return signal using, at least, a spectrograph (100) and camera (110) to obtain a Raman signature for the target substance, and identifying the target substance based on the Raman signature for the target substance and a database of Raman signatures. The laser light wavelength is selected based on a ratio of Raman return signal power to fluorescence power.

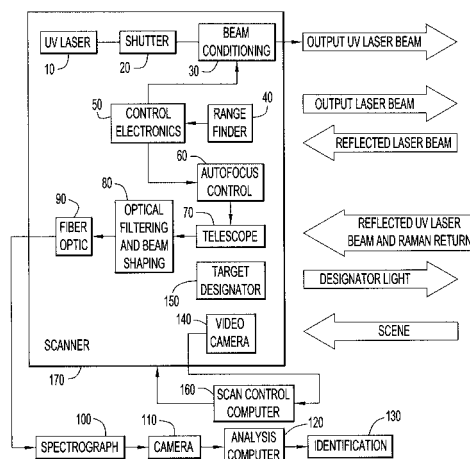


FIG.1

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