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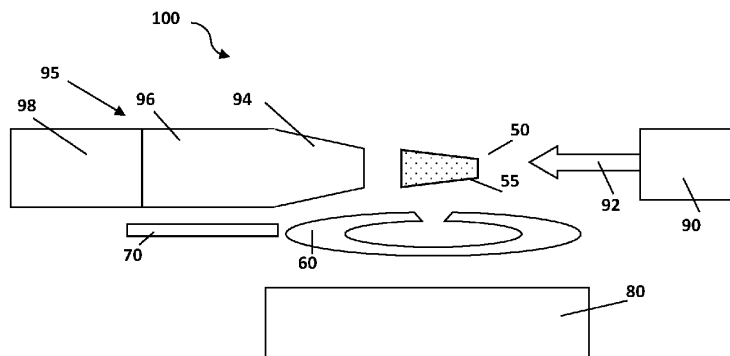


FIG. 1

(57) Abstract: An optical collector and a respective sensor unit are described. The sensor comprising at least one crystal structure comprising an ensemble of color centers, at least one optical detector and an optical collector positioned between said at least one crystal structure and said at least one optical detector for directing optical emission from said at least one crystal structure to said at least one optical detector. The least one crystal structure has geometrical shape of a trapezoid prism having one of a first and second parallel facets directed toward the optical collector. The optical collector is formed as a planar waveguide having first trapezoid section interfacing said at least one crystal and a second rectangular section for transmitting collected light toward the at least one optical detector.

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