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(54) Title: MULTI-TRACK RAMAN ANALYZER

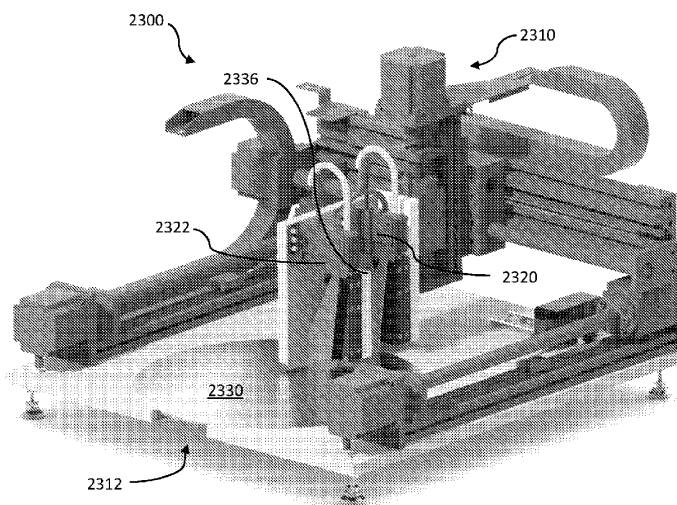


FIG. 23

(57) Abstract: A spectroscopy system simultaneously obtains Raman measurements from multiple samples or multiple areas of a liquid or solid sample. At least two Raman probes simultaneously acquire spectra from the sample(s) using an imaging spectrometer having a single shared two-dimensional scientific CMOS sensor. Each probe is coupled to a laser, which may be integrated into the probe, and the spectrometer and includes a lens focusing laser light within or on the sample and collecting light from the sample for the spectrometer. The spectrometer images light from multiple probes simultaneously on the scientific CMOS sensor, spaced from one another to reduce crosstalk. A sample positioning device and a probe positioning mechanism may provide relative movement between samples or sample areas and the probes to acquire data from a different subset of samples or sample areas, and may also adjust probe distance from the sample(s) for desired laser focus spot size and location.

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