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(54) Title: SYSTEMS AND METHODS FOR DYNAMIC RAMAN PROFILING OF BIOLOGICAL DISEASES AND DISORDERS AND FEATURE ENGINEERING METHODS THEREOF

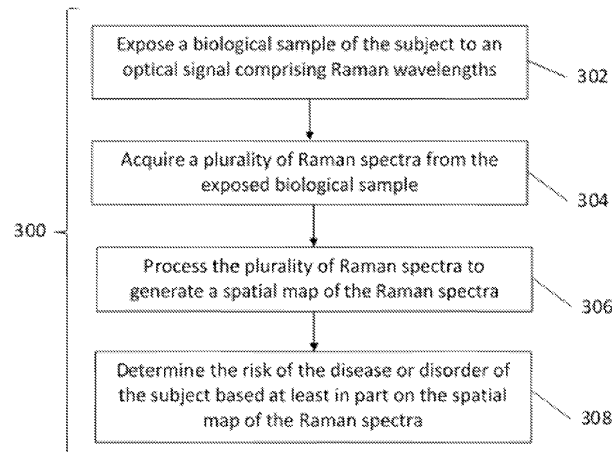


Fig. 3

(57) Abstract: The present disclosure provides methods and systems for predicting a subject's diagnostic status with respect to a disease or disorder. The method may comprise exposing a biological sample of the subject to a laser, acquiring a plurality of Raman spectra from the exposed biological sample, processing the plurality of Raman spectra to generate a spatial map of the plurality of Raman spectra, and predicting a subject's diagnostic status with respect to disease or disorder based at least in part on the spatial map of the plurality of Raman spectra. The analyzing may comprise determining temporal dynamics of underlying biological processes.

[Continued on next page]

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