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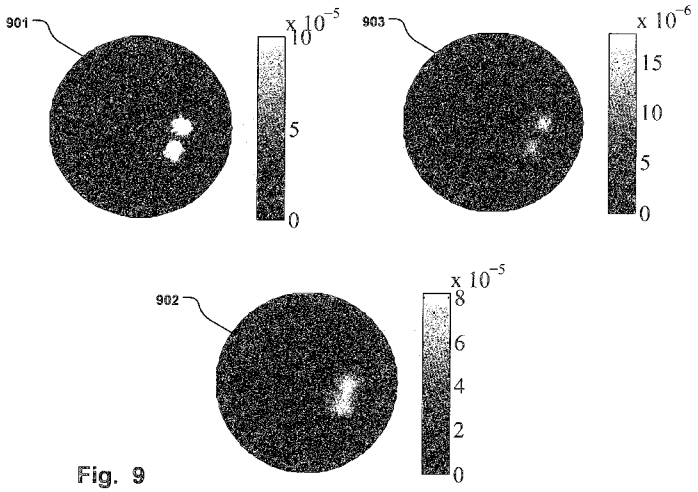


Fig. 9

(57) Abstract: A method and system for luminescence molecular imaging or tomography of a region of interest in a scattering medium is disclosed. The system comprises a non-linear luminescent marker material arranged in the scattering medium. Contrast and resolution of the imaging or tomography is thus improved. The non-linear marker is for instance configured to upconvert incoming light of an illumination wavelength. The non-linear power dependence of the marker enables further improvement of the imaging by using images taken with two or more excitation beams simultaneously.

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