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(54) Title: METHOD FOR COMPLEX WAVEFORM DETECTING AND IDENTIFYING CHEMICAL ODORS AND ODOR MIXTURES

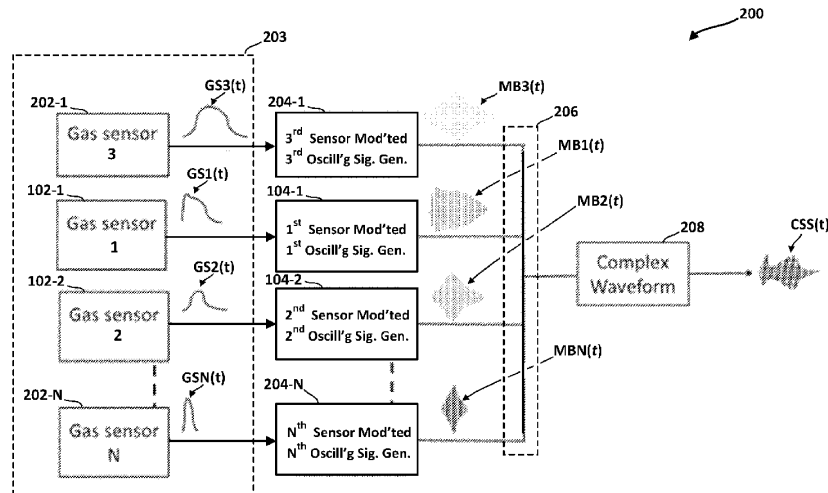


Fig. 2

(57) Abstract: Methods include, for example, in an embodiment, exposing an odorant to a sensor array having a first and second sensor, respectively configured with a first response characteristic and a different second response characteristic. In an embodiment, responsive to the odorant the first sensor outputs a first sensor signal with a signal versus time characteristic and the second sensor outputs a second sensor signal with a different signal versus time characteristic, due to the different second response characteristic. Methods include, in an embodiment, a generating using the first and the second sensor signals of a signal having a complex waveform shape corresponding to the odorant and, optionally, to a concentration of the odorant. The generating includes, for example, in an embodiment a translating of the first and second sensor signals to respective sensor signal modulated oscillating signals, and combining the sensor signal modulated oscillating signals.

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