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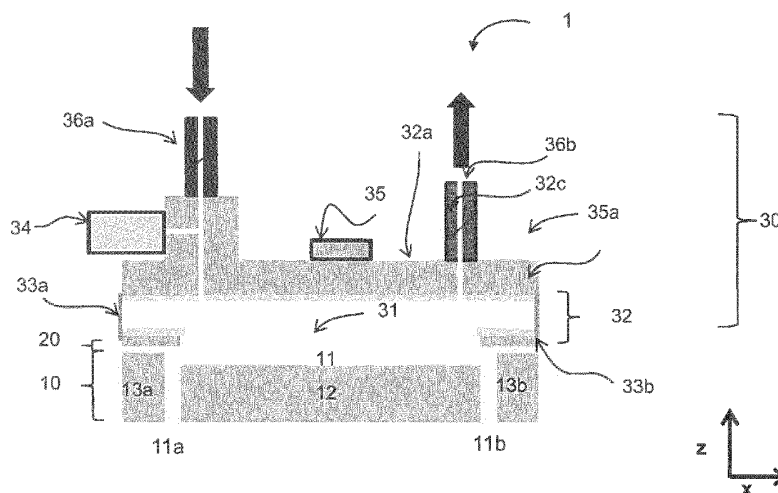
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(54) Title: APPARATUS FOR THE MEASUREMENT OF CHEMICAL ACTIVITY COEFFICIENTS OF GAS PHASE SPECIES
IN THERMODYNAMIC EQUILIBRIUM WITH LIQUID PHASE

Fig. 1



(57) Abstract: The invention relates to an apparatus for measuring chemical activity coefficients of volatile chemical species dissolved in a gas phase in thermodynamic equilibrium with a liquid phase comprising: (a) a fluidic part (10) intended to contain a liquid or liquid-gas sample comprising volatile chemical species; (b) an analytical part (30) comprising a light source capable of emitting a light which wavelength lies in the range from 100 nm to 1 mm, preferably from 0.75 μm to 25 μm , a waveguide (32) and means for detecting light passing through the waveguide (32) so as to detect said volatile chemical species dissolved in said gas phase; and (c) a permeable membrane (20) closing the fluidic part (10), so as to physically separate the fluidic part (10) from the analytical chamber (30), said permeable membrane (20) comprising pores having each a pore size between 1 nm and 100 nm, for instance between 10 nm and 100 nm depending on the sample to be analyzed and the material used for the membrane and further having: a thickness between 1 μm and 100 μm , and a porosity between 0.55 and 0.95, preferably between 0.7 and 0.95.

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