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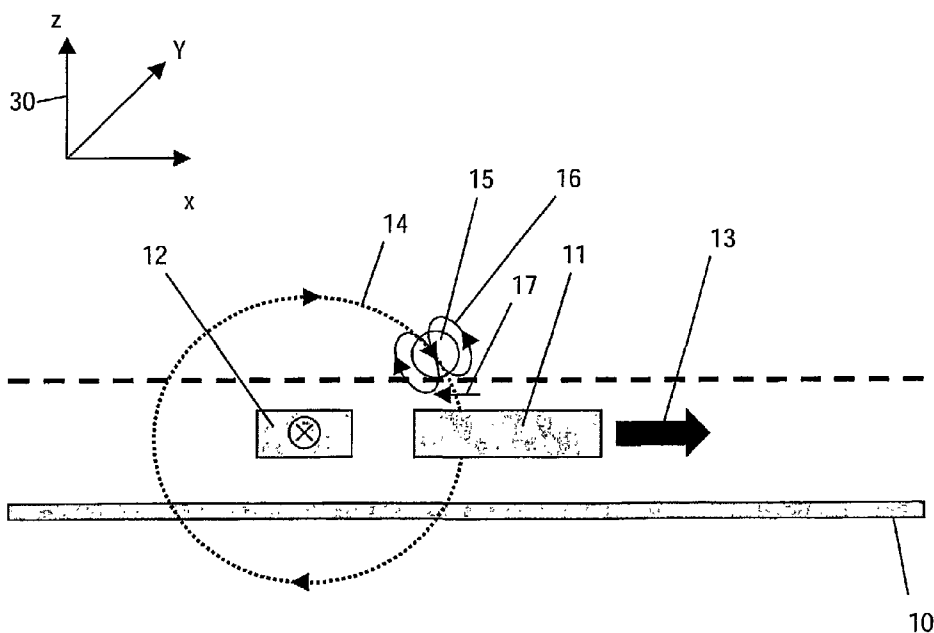
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(54) Title: ON-CHIP MAGNETIC PARTICLE SENSOR WITH IMPROVED SNR



(57) Abstract: A device and method is disclosed for the detection or determination of the presence of magnetic particles (15), such as for example, but not limited to, magnetic nanoparticles. In particular it relates to an integrated or on-chip magnetic sensor element (11) for the detection of magnetic particles. The device and method of the present invention offer high signal-to-noise ratio and low power consumption and do not require an external magnetic field. They may be used for magnetic detection of binding of biological molecules on a micro-array or biochip.

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