

Title (en)  
COHERENCE MICROSCOPE

Title (de)  
KOHÄRENZMIKROSKOP

Title (fr)  
MICROSCOPE COHERENT

Publication  
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Application  
**EP 03789300 A 20031216**

Priority  
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Abstract (en)  
[origin: WO2004055570A2] The invention relates to a coherence microscope which comprises a light source (1) that emits time-incoherent light. The confocal coherence microscope further comprises a divider (3) for dividing up the light emitted by the light source (1) into a measuring light which is supplied to a sample (13) and is reflected by the same, and into a reference light. A superposition device (25, 31) spatially superimposes the measuring light reflected by the sample (13) with the reference light. A linear array (41) is used to detect the light resulting from said superposition and is adapted to allow for a read-out rate of at least approximately 60 kHz. In order to obtain read-out rates of said order, especially short linear arrays (41) comprising not more than approximately 1000 sensor elements, for example CCD elements, and especially ultra-short linear arrays (41) comprising not more than approximately 500 sensor elements are used. The superposition device is provided with an emission device (25, 31) for emitting the measuring light and the reference light, which is adapted and disposed relative to the sensor array (41) in such a manner that at least a part of the sensor array (41) is irradiated with superimposed light over a prolonged period of time. The ratio of the distances covered by the measuring light and the reference light from the emission device (25, 31) to the respective point of incidence on the sensor array (41) varies in the section of the sensor array (41) that is irradiated with superimposed light.

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