

Title (en)  
SCATTERED-LIGHT LASER MICROSCOPE

Title (de)  
LASERSTREULICHTMIKROSKOP

Title (fr)  
MICROSCOPE LASER A LUMIERE DIFFUSEE

Publication  
**EP 0695432 A1 19960207 (DE)**

Application  
**EP 94912459 A 19940419**

Priority  
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Abstract (en)  
[origin: US5764364A] PCT No. PCT/DE94/00419 Sec. 371 Date Mar. 21, 1996 Sec. 102(e) Date Mar. 21, 1996 PCT Filed Apr. 19, 1994 PCT Pub. No. WO94/24600 PCT Pub. Date Oct. 27, 1994The invention relates to a method for laser-microscopic magnification of objects, and to a device for implementing the method. In particular, organic, elastic or insulating objects, as well as their surface structures, can be examined down to the nanometer range by this method in a contactless manner and without preparation, and the optical signals generated can be processed with little technical effort. To this end, the specimens are irradiated with a laser beam which has previously been expanded to a larger beam diameter via an expanding lens system (3) and subsequently focused to the smallest possible beam diameter by means of a focusing lens (5) of short focal length. The object can be screened in this context. The intensity of the reflected light and scattered light (6) is detected at a very large solid angle, preferably on the inner surface of one of two hemispherical bowls with direct or indirect photosensors. Optical fibers can be used as photosensors.

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IPC 8 full level  
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