

Beam splitter and arrangement for examining a sample which can be excited by means of electromagnetic radiation

ABSTRACT

The invention relates to an arrangement (01) for examining a sample (10) which can be excited by means of electromagnetic radiation (07). The arrangement comprises a first dichroitic beam splitter (02) having a first and a second prism (03a, 03b), which are connected to one another on the base surfaces thereof, and a dichroitic layer (04) arranged between the base surfaces of the two prisms (03a, 03b), wherein an entry surface (06) of the first prism (03a) encloses an angle (β) in the range from 10° to $<40^\circ$ with the dichroitic layer (04). Furthermore, the arrangement comprises a light source (05) for providing the electromagnetic radiation (07) suitable for excitation of the sample (10), wherein the radiation (07) is coupled into the entry surface (06) of the first prism (03a) and wherein a part of the radiation (07) is reflected on the dichroitic layer (04) in the direction of the sample (10), which is positioned downstream of an exit surface (11) of the first prism (03a). Finally, the arrangement comprises a detector (14) for detecting electromagnetic radiation (13) emitted by the sample (10), passed through the beam splitter (02) and leaving the latter on a measurement surface (16). The invention further relates to a dichroitic beam splitter (02), in particular for use in said arrangement (01).

Fig. 1