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Title: Total reflection spectrometer measure apparatus for measuring total reflection terahertz wave, has terahertz wave detection antenna fixed to output surface that is abutted against step-difference parts

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Abstract: NOVELTY - The apparatus has a beam splitter i.e. branch part, utilized for branching a laser beam emitted from a light source in a pump light and a probe light. A terahertz wave generation antenna (32) generates a terahertz wave by injection the pump light branched in the branch part. An entrance plane (31a) and an output surface (31b) an internal total reflection prism (31) are provided with step-difference parts (51A, 51B), respectively. A terahertz wave detection antenna (33) is fixed to the output surface that is abutted against the step-difference parts.

USE - Total reflection spectrometer measure apparatus for measuring total reflection terahertz wave.

ADVANTAGE - The apparatus has an optical surface that condenses the terahertz wave totally reflected at a reflective surface toward a terahertz wave detection antenna provided between a flat reflective surface the internal total reflection prism and the output surface the internal total reflection prism, thus improving the strength detection signal in the terahertz wave detection antenna.

DESCRIPTION DRAWING(S) - The drawing shows a perspective view an integrated prism a total reflection spectrometer measure apparatus.

Internal total reflection prism (31)

Entrance plane Internal total reflection prism (31a)

Output surface internal total reflection prism (31b)

Terahertz wave generation antenna (32)

Terahertz wave detection antenna (33)

Step-difference parts (51A, 51B)

Drawing:

Derwent Class Code(s): S03 (Scientific Instrumentation, photometry, calorimetry)

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