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Abstract:The influence of varied water distribution in different locations of the mesophyll and mid-vein of the same leaf on the absorption and refraction coefficient is described. And the further comparisons between green leaf and yellow leaf reveal that the complex permittivity of leaf can provide important information about the water content and can characterize the changes of the water distribution of the leaf. So our measurements tend to demonstrate that the dielectric material parameters will be employed to determine the leaf water status in plant leaves. © 2012 Chinese Optics Letter.
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