



Nonlinear characterization of materials using the $D4\sigma$ method inside a Z-scan 4f-system

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Résumé en anglais	<p>We show that direct measurement of the beam radius in Z-scan experiments using a CCD camera at the output of a 4f-imaging system allows higher sensitivity and better accuracy than Baryscan. One of the advantages is to be insensitive to pointing instability of pulsed lasers because no hard (physical) aperture is employed as in the usual Z-scan. In addition, the numerical calculations involved here and the measurement of the beam radius are simplified since we do not measure the transmittance through an aperture and it is not subject to mathematical artifacts related to a normalization process, especially when the diffracted light intensity is very low.</p>
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Liens

- [1] <http://okina.univ-angers.fr/g.bou/publications>
- [2] <http://okina.univ-angers.fr/vbesse/publications>
- [3] <http://okina.univ-angers.fr/c.cassagne/publications>
- [4] <http://okina.univ-angers.fr/herve.leblond/publications>
- [5] [http://okina.univ-angers.fr/publications?f\[author\]=8609](http://okina.univ-angers.fr/publications?f[author]=8609)
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