Erratum

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Cantilever-based photoacoustic detection of carbon dioxide using a fiber-amplified diode laser

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In the paper "Cantilever-based photoacoustic detection of carbon dioxide using a fiber-amplified diode laser" the figures of merit have been calculated erroneously and they cannot be compared to other works. Using the peak absorption cross section of a Voigt profile at room temperature and 250 mbar pressure for the CO_2 line the following noise equivalent figures of merit are obtained. The pressure broadening has been estimated by using the pressure broadening coefficients from the HITRAN database.

Parameter	Prior work [16] CO_2 in N_2	This work CO_2 in Ar	
Excitation power (mW)	30	30	600
Detection frequency (Hz)	163	79.3	
Optical path length in the PA cell (cm)	20	6.1	
CO_2 detectivity (ppm)	7.9	4.6	0.23
Minimum detectable optical density, $\alpha_{min}l$	2.9×10^{-7}	5.2×10^{-8}	2.6×10^{-9}
Minimum detectable absorption coefficient, α_{min} (cm^{-1})	1.5×10^{-8}	8.5×10^{-9}	4.2×10^{-10}
Minimum normalized noise-equivalent sensitivity (cm^{-1} WHz$^{-1/2}$)	4.6×10^{-9}	2.2×10^{-9}	

TABLE 1 Comparison of the results obtained in the prior work and in this work. All the figures of merit refer to noise-equivalent (1σ) values

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