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Review

NMR spectroscopy applied to amine–CO_2–H_2O systems relevant for post-combustion CO_2 capture: A review

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ABSTRACT

Nuclear Magnetic Resonance (NMR) spectroscopy is a powerful non-invasive analytical technique for chemical analyses since direct measurements at a molecular level can be performed. In this work, a survey of NMR spectroscopy applied for studies of CO_2 absorption in aqueous amine solvents (amine–CO_2–H_2O) relevant for post-combustion CO_2 capture is presented. Technical aspects of NMR experiments and the main applications with corresponding results are provided. The overview of the NMR literature in this field suggests that studies of amine–CO_2–H_2O systems can benefit from a further consideration of this spectroscopic technique.

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