



## Flame stabilization of highly diffusive gas mixtures in porous inert media

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Flame propagation experiments in porous media were carried out for mixtures with different Lewis-numbers in order to determine the critical Peclet-number, above which flame propagation is possible. The critical Peclet-number of 65, known from previous studies, was confirmed for mixtures with Lewis-numbers above and equal to unity but for mixtures with a high diffusive mass transport to heat transport ratio, i.e. with Lewis-numbers below unity, the critical Peclet-number was found to lie far below this limit. The experimental results allow for a better design of flame traps for highly diffusive mixtures.

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