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# A discussion on bond energies and bond lengths

(Discussion held 9 March 1950—Complete MS. received 3 November 1950)

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## INTRODUCTION TO THE DISCUSSION

BY M. G. EVANS, F.R.S.

### *The inter-relation of bond energy 'terms'*

There is little ambiguity when one speaks of bond lengths, but the term 'bond energy' has been given several interpretations and it would be useful if we had these in mind in our discussion.

In the beginning it was a useful simplification to assume as did Fajans that the energy required to break a particular bond was a constant characteristic of that bond and independent of the molecular environment. Now we know that this is not the case and indeed a great part of our discussion will be concerned with the differences in bond dissociation energies.

Let us first inquire what information we can obtain from thermochemical measurements.

\* Elected F.R.S. on 16 March 1950.