Complexity of Alkane Isomers and their Concentration in Crude Oil

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Complexity of alkane isomers is usually accounted for in terms of topological indices. The rankings based on these indices are not unambiguous and in addition no empirical quantity was proposed to represent complexity so far. In this work the "lowest degrees first" codes [1] were proposed to account for the complexity – and therefore for the ordering – of the alkane isomers. The concentrations of the alkanes in crude oil were considered an experimental measure of their complexity. It was shown that crude oil contains only relatively simple isomers of nonanes and decanes.

References

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