

Low barrier hydrogen bonds in sterically modified Schiff bases.

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2002

Czasopismo

Journal of the Chemical
Society-Perkin Transactions
2: Physical Organic
Chemistry

Strony

835-842

DOI

10.1039/B106145N

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Five derivatives of an *ortho*-hydroxy Schiff base (2-(*N*-alkyl- α -iminoethyl)phenols) with very short intramolecular hydrogen bonds ($d_{\text{O(H)}\cdots\text{N}} \leq 2.500 \text{ \AA}$) were synthesised. The crystal structures were determined. The steric repulsion of the substituted methyl group results in an unusual strengthening of the hydrogen bonds, decreasing the barrier for the proton movement within the hydrogen bridge, which leads to a delocalization of the proton position. The very strong influence of the character of the substituent in the phenol ring as well as the character of the *N*-alkyl chain on the proton distribution is demonstrated for these hydrogen bonds from the so-called inversion range.

Adres publiczny

DOI <https://doi.org/10.1039/B106145N>

Strona internetowa wydawcy

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