Novel Structure of 1,1'-Disubstituted Ferrocene Derivative

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Some of the 1,1'-disubstituted ferrocene derivatives (bMAF-*n*, *n* is the carbon number in the flexible spacer) show liquid crystallinity. It was reported that bMAF-5 had S-typed molecular structure [1]. The S-shaped one of the other derivative was already reported by the other workers [2]. Recently, new U-typed one was found out in bMAF-10 [3].

In this study, the crystal structure of bMAF-2 was analyzed by single crystal X-ray diffraction method. All measurements were made by Rigaku AFC-5R diffractometer with graphite monocromatized CuKα radiation. The crystal structure obtained in this study was a monoclinic with space group *C2/c*. The residual R and wR converged on 0.036 and 0.067, respectively. The feature of the structure was very unique, because the two substituent had a bent structure around a *gauche* conformation. This molecular structure was given a name to Z-shape, which was different from those of bMAF-5 (S-shape) and 10 (U-shape).

Liquid crystallinity will be discussed from structural point of view.

[1] Nakamura N., et al, *Mol. Cryst. Liq. Cryst.,* 2005, *in press*. [2] Khan A.M., et al., *Liq. Cryst.,* 1989, **5**, 285. [3] Nakamura N., et al, *Chem. Lett.,* 2004, **33**, 358.

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