The paper "*Anatomy of a discovery: the twist-bend nematic phase*" by D. Dunmur is an excellent review of the theoretical prediction, the experimental discovery and the intensive study of the twist-bend nematic phase in the next decade. The paper, which Author participated to the discovery of the twist-bend nematic (see Ref. 4) and the description of its structure and main physical properties, is clearly written, detailed, and very informative. In my opinion, the paper describes one of the most important advances in the liquid crystal research in recent years in which the contribution of the UK scientists was of decisive importance. Therefore, I enthusiastically recommend the paper for publication in the special issue of *Crystals* "State-of-the-Art Liquid Crystals Research in UK".

I would like to attract the attention of the Author to the following two points in which maybe some further details will be useful:

1. The cited paper of Mettout, ref. 20, is a later development of two previous papers of Lorman and Mettout: V. L. Lorman and B. Mettout, *Unconventional mesophases formed by condensed vector waves in a medium of achiral molecules*, Phys. Rev. Lett. **82**, 940 (1999); V. L. Lorman and B. Mettout, *Theory of chiral periodic mesophases formed from an achiral liquid of bent-core molecules*, Phys. Rev. E **69**, 061710 (2004). In these works, they predicted and described what was initially called "unconventional mesophases", different from both the nematic and smectic phases. However, a present-day analysis of their work reveals that one of these phases has practically the structure of the Meyer's twist-bend – a nematic with transversal ferroelectric order and heliconical arrangement of the director.
2. As shown in the paper, some of the crucial features of the N_{TB} phase, as the extremely small value of the pitch (< 10 nm), the value and the temperature dependence of the tilt angle, the coexistence of doubly degenerate monochiral domains, etc., were inaccessible in Ref. 4 and were demonstrated only later. An important early result concerning these properties was presented as an oral contribution in 2012 at the 24th ILCC, Mainz, Germany (C. Meyer et al., Broken-symmetry nematic banana phases: predictions and reality) and later published in 2013 (see ref. 54). In this work were experimentally obtained large coexisting monochiral N_{TB} domains with both left and right chiralities. The "electroclinic" effect observed in these domains is a direct experimental proof of the chirality of the phase – by symmetry this effect is impossible in achiral media. The sign inversion of the effect from one domain to the next is also a direct proof of the doubly degenerate chirality of the N_{TB} phase. More importantly, from the theoretical analysis of the results the heliconical pitch of CB7CB was estimated to be about 7 nm. This incredibly small value was confirmed in 2013 by FFTEM in refs. 39 and 40.
   In the same work the tilt angle close to the N-N_{TB} transition was estimated to be about 10°. A later paper of the same Authors (C. Meyer et al., *The temperature dependence of the heliconical tilt angle in the twist-bend nematic phase of the odd dimer CB7CB*, J. Mater. Chem. C **3**, 318 (2015)) provided precise measurement of the temperature dependence of the pretilt angle, estimation of the small jump of the nematic order parameter at the N-N_{TB} transition, and discussed the structure of the defect wall separating the monochiral domains of opposite handedness.