## Qeios

### Peer Review

# Review of: "Axion-Photon-Mixing Dark Matter Conversion Mediated by Torsion Mass Constrained by the Barbero-Immirzi Parameter"

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The inclusion of the torsion within possible extensions of the Standard Model represents a very interesting line of modern theoretical physics. While most of the earlier studies on this issue were dealing with the purely gravitational aspects of this problem, actually, some extensions of such studies for models involving other fields began to arise. In the present paper, an attempt to introduce torsion within studies of axion-photon interactions is made.

In this paper, the torsion is assumed to behave as a dynamical vector field, and its equations of motion are studied. Afterwards, several rather interesting phenomenological estimations for photon-torsion and axion-torsion couplings are presented. The absence of ghosts and tachyons is argued.

In my opinion, after minor grammatical editing, the text can be published.

### Declarations

**Potential competing interests:** No potential competing interests to declare.

1