

**Title of Article:** Mathematical Modeling of Bloch NMR to Explain the Rashba Energy Features

**Author(s):** Moses E Emetere

**Outlet:** World Journal of Condensed Matter Physics, 2013, 3(1) 87-94(2013)

**Abstract:** The Bloch NMR as an analytical tool was able to address the fundamental features in the learning of spintronics. Beside confirming past assertions on the Rashba spin-orbit interaction, thermal motion of hole and electron spin and features of the quantum well, it was also able to explain the condition necessary for Rashba splitting within the quantum well. When the Rashba energy is 43 meV, it modified the Ehrenfest's theorem to hold for an external magnetic field. The confinement potential which is the strength of the Rashba spin-orbit interaction was shown to be controlled magnetically.