

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

﴿سُرِّيهِمْ آيَاتِنَا فِي الْأَفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ

أَوَّلَمَ يَكْفِ بِرَبِّكَ أَنَّهُ عَلَىٰ كُلِّ شَيْءٍ شَهِيدٌ﴾ (53) ﴿فُصِّلَتْ.

Dedication

I dedicate my dissertation work to my family and my friends, special feeling of gratitude to my loving parents, whose words of encouragement and push for tenacity ring in my ears. To my brothers, sisters and my wife she is never left my side.

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Abstract

In this research Maxwell's electric wave equation was modified by inserting diffusion current and polarization terms, Maxwell's equation are used to derive Schrödinger equation beside Einstein energy-momentum relation by replacing the electric field intensity by the wave function because both of them depend on energy density. A new generalized quantum equation which accounts for a relativistic rest mass energy beside potential energy as well as medium friction is also derived.

المستخلص:

في هذا البحث تم تعديل معادلة ماكسويل للمجال الكهربائي باستخدام تيار الانتشار وحد الاستقطاب. كذلك أستخدمت معادلات ماكسويل لاستنباط معادلة شرودنجر وعلاقة اينشتاين للطاقة والزخم وذلك بإستبدال كثافة المجال الكهربائي بالدالة الموجية لأن كلاهما يعتمد على كثافة الطاقة. أيضاً تم استنباط معادلة كمية جديدة تحوي طاقة الكتلة السكونية النسبية وطاقة الجهد وحد الاحتكاك.