

Maxwell's Equation

the electromagnetic field can be summarized to the following 4 equations.

$$\nabla \cdot \boldsymbol{D} = \rho \quad (1)$$

$$\nabla \times \boldsymbol{E} = -\frac{\partial \boldsymbol{B}}{\partial t} \quad (2)$$

$$\nabla \cdot \boldsymbol{B} = 0 \quad (3)$$

$$\nabla \times \boldsymbol{H} = \boldsymbol{j} + \frac{\partial \boldsymbol{D}}{\partial t} \quad (4)$$