4.1. Introduction

4.1a. Magnets allow preferential injection of spins into non-magnetic materials because

(a) spins pointing parallel and anti-parallel to the magnetization have different potentials

(b) spins pointing parallel and anti-parallel to the magnetization have different interface resistances

(c) spins pointing parallel and perpendicular to the magnetization have different potentials

(d) spins parallel and perpendicular to the magnetization have different interface resistances

(e) none of the above

4.1b. A key difference between electron spin and photon polarization is that

(a) orthogonal spins are anti-parallel, while orthogonal polarizations are perpendicular

(b) orthogonal spins are perpendicular, while orthogonal polarizations are anti-parallel

(c) spins are associated with rotation, polarization is not

(d) unlike photons, there are no polarizers and analyzers for electrons

(e) none of the above