to (scattering, spectroscopic, calorimetric, molecular modeling, microscopy, etc.). From Nature to Advanced Materials: Structure Characterization at the Electron Microscopy in Material Science - ScienceDirect Syllabus MSE 581: Advanced Electron Microscopy. Course practice in relationship to materials structure characterization and microanalysis. Topics include the physics of electron microscopes, kinematic and dynamic electron diffraction. Topics in Electron Diffraction and Microscopy of Materials (Hardback). The steady improvement of transmission electron microscopy (TEM), scanning. diverse and each book could only describe a small portion of these topics. x-ray and neutron diffraction for materials research, a status it has not yet achieved.