**Properties of Crystal Defects**

**Chapter 1:** Reminders on Crystal Structure

 **Chapter 2:** Point Defects: Interstitial Site, Substitutional Site, Vacancy

* Formation and Migration of Point Defects
* Experimental Determination of Equilibrium Concentration
* Color Centers

 **Chapter 3:** Linear Defects (Dislocations)

* Geometric Description (Burgers Vector, Types of Dislocations)
* Dislocation Movement (Slip System)
* Elastic Properties of Dislocations
* Interaction Between Dislocations
* Methods of Dislocation Observation

 **Chapter 4:** Two-Dimensional Defects

* Grain Boundaries
* Stacking Faults and Twins

 **Chapter 5:** Three-Dimensional Defects

* Precipitates (Coherent and Incoherent)
* Precipitate-Dislocation Interactions

 **Chapter 6:** Factors Influencing Electrical Conductivity and Material Hardness