MATERIALS SCIENCE & ENGINEERING
TEXAS A&M UNIVERSITY

Introduction to Materials Science & Engineering

Atomic Bonding

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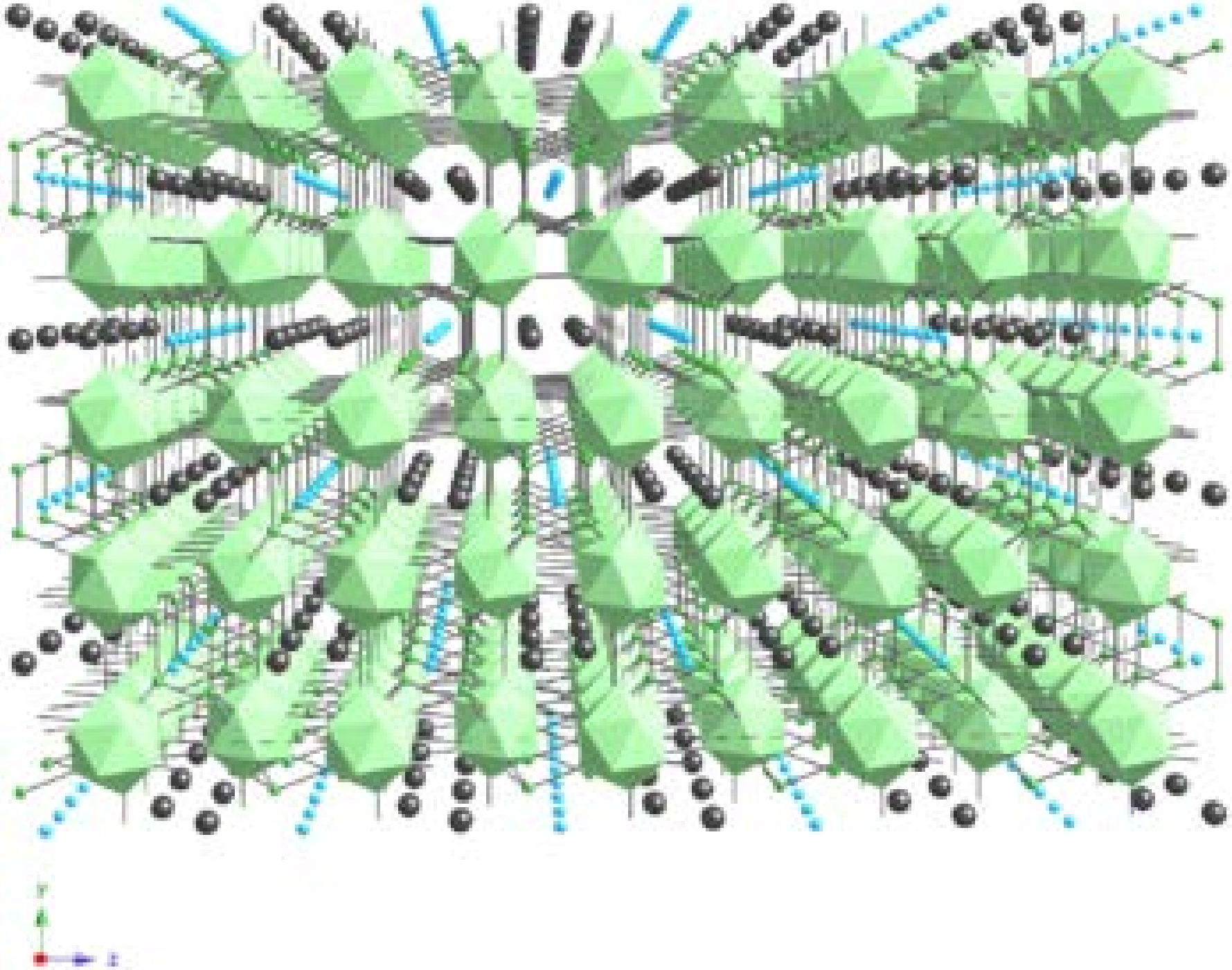
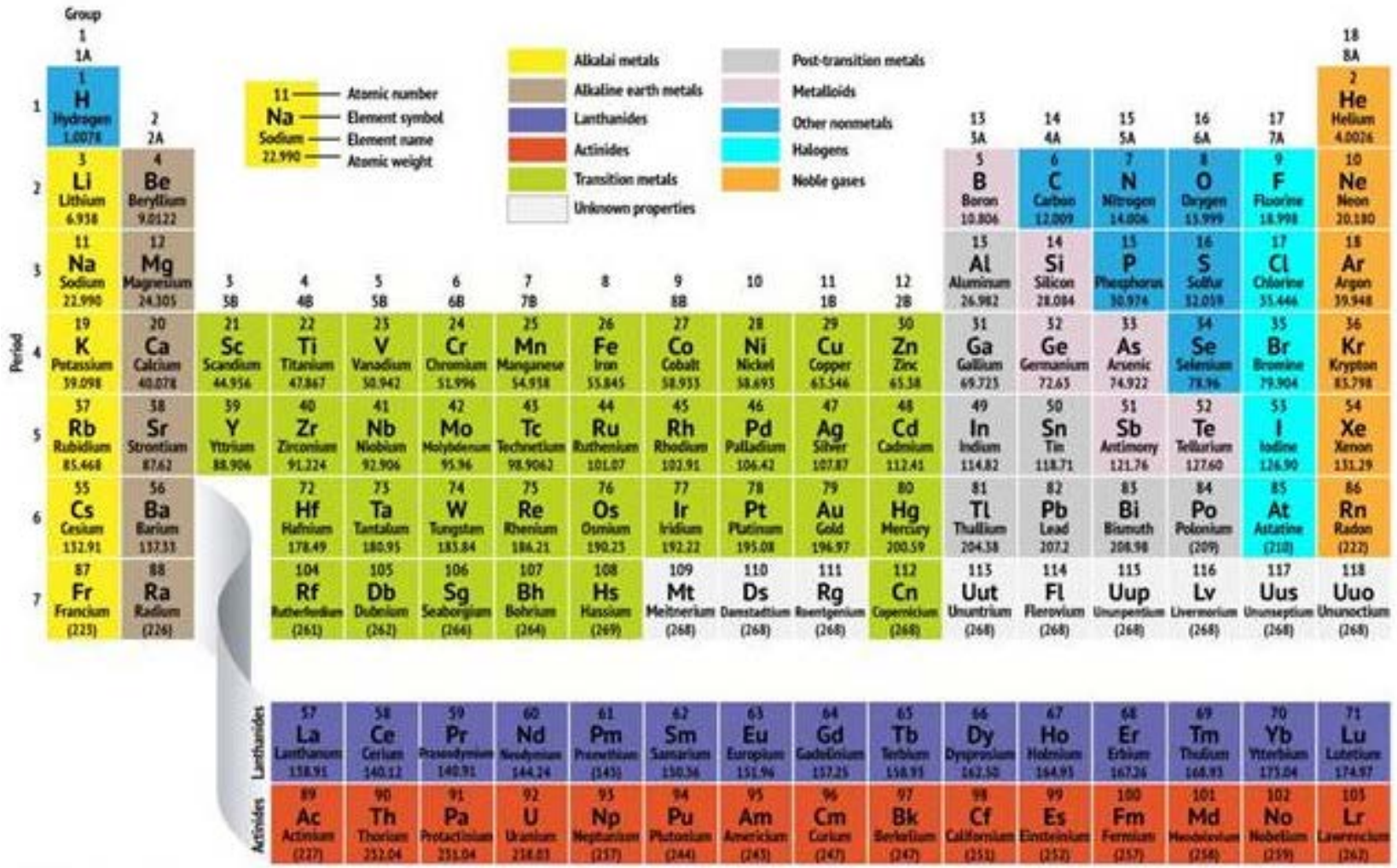
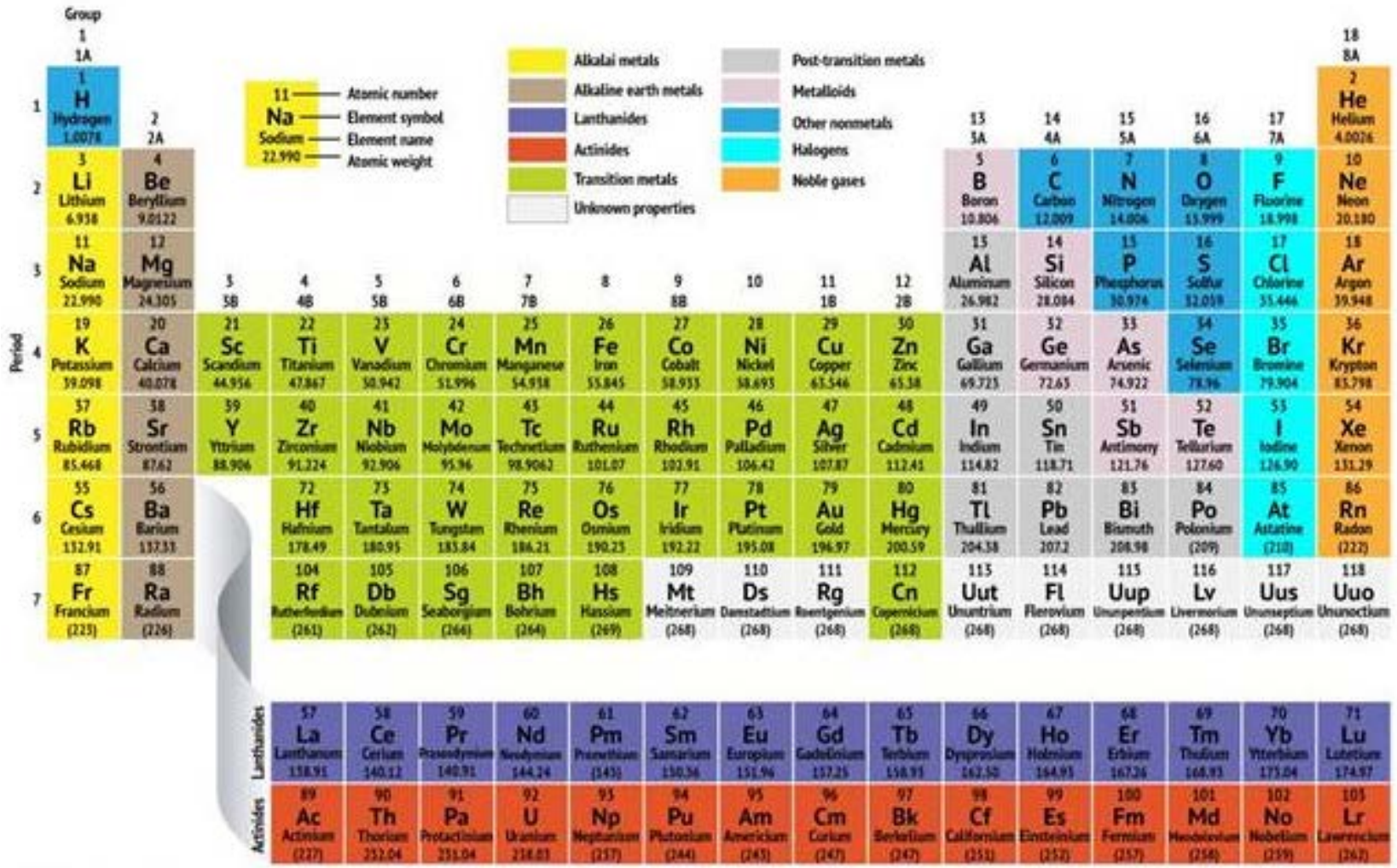


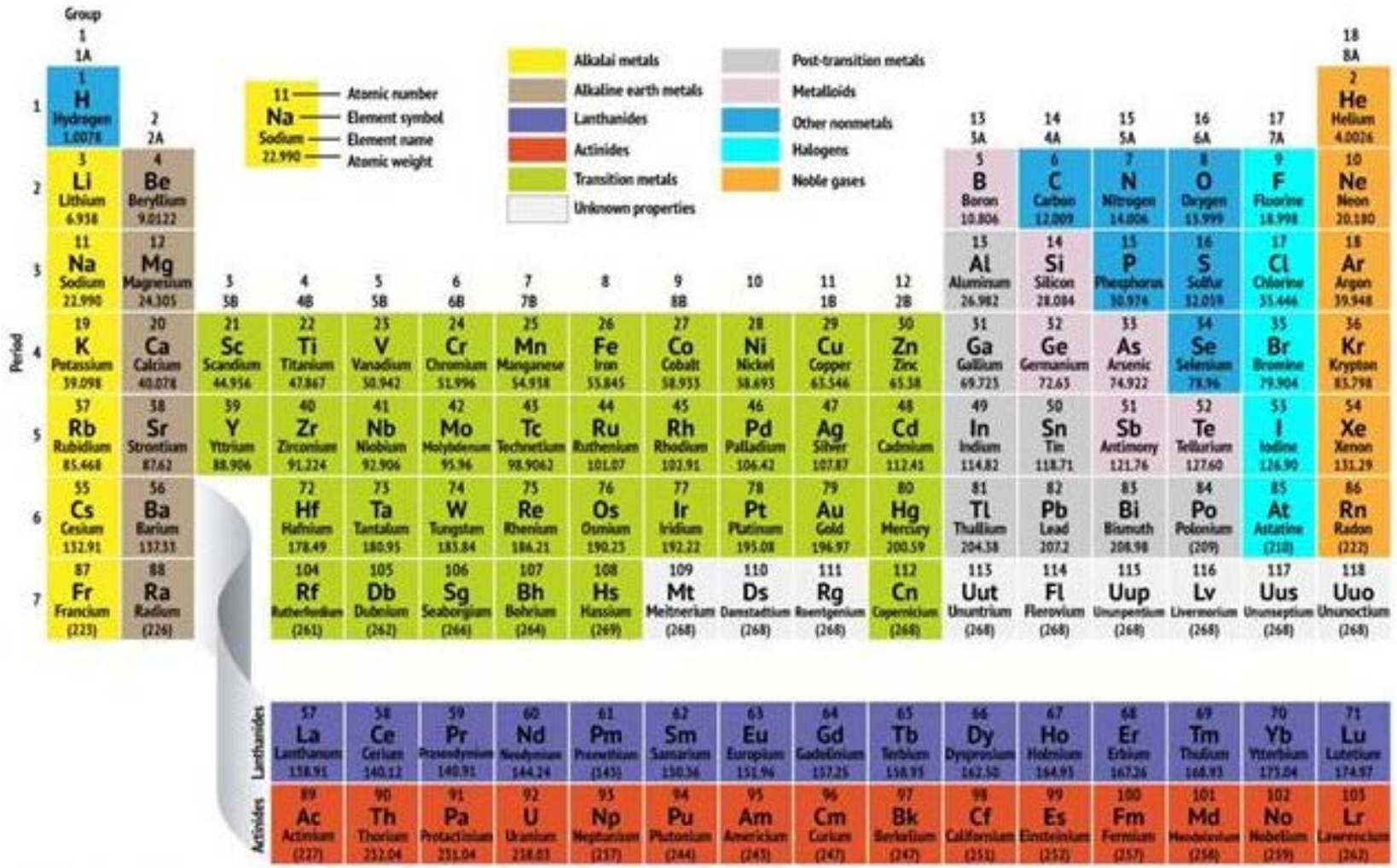
Ionic Bonding



Metallic Bonding



Covalent Bonding



Secondary Bonding

Bonding Energy

Ionic Cov Metallic

- Primary Bonding:
  - Covalent
  - Ionic
  - Metallic

- Secondary/Van der Waals Bonding:
  - Induced dipole/induced dipole
  - Permanent/induced dipole
  - Permanent/permanent dipole
  - H-bonding

- Bonding can be gradational!