

**Scope of Future Work:**

- To study the effect of interlayer on Corrosion and Wear Behaviour of  $\text{Ti}_2\text{N}$ ,  $\text{ZrN}$  and  $\text{ZrTiN}$  with and without Ti/Zr interlayer
- Use of Multilayered  $\text{Ti}_2\text{N}$  and  $\text{ZrN}$  with varying modulation and Thickness.
- To study the effect of substrate and improvement in practical efficiency by depositing these Thin Films on High speed tool steel or Cemented carbide cutting tools. (Conventional cutting tool)
- Use of sophisticated instruments like Selected Area Diffractometer (SAD) and Transmission electron microscopy (TEM) for wear particle analysis.
- Use of Glazing angle XRD to find Residual stresses and Texture within the coating.
- Study of Biocompatibility of these coatings.