

Wednesday, May 13

12:30 p.m. - 1:10 p.m. TS-2 Coatings for Automotive Applications

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Invited 40 min. Talk

Wear protecting PVD coatings were first introduced on a large scale to automotive applications in the early eighties; AlSn₂₀Co nanocomposite coatings on conrod bearings were the materials enabling the introduction of the first turbocharged diesel engines. But the big wave started with the introduction of the WC/C coatings for the new hydraulic cam followers of the common rail system by Balzers/Bosch/INA. From there on, the application of PVD coatings spread quickly to a wide range of components. PVD coatings for automotive components have become the fastest growing sector of PVD wear protection coatings and the main enabler of innovations in cars. Today PVD coatings can be found in almost every system of a car. This tutorial will present the requirements and wear mechanisms of the most important subsystems of cars and compare them with the PVD coatings currently used. A special focus will be given to the recent and current developments for engine components.