CONCLUSIONS: Extremely accurate (1%) spectral emissivities and reflectances have been successfully applied to solids, liquids, and uncooled materials that have been studied in the solid, liquid and undercooled states. The second side presented illustrates the potential of applying the DPP to materials at high temperatures that can be treated as the matured in preliminary results on solid and liquid abundance of the temperature dependence of the spectral emissivity. The DPP is an effective tool to measure the true thermodynamic temperature of materials at high temperatures that are not in a thermodynamic equilibrium.

RESULTS: The results presented at the workshop are summarized in the abstract.

ABSTRACT

...
UNDERCOOLED: Si, Pt, Nb, Zr, Pd, Zr, Al, Ti, Nb
LIQUIDS: Si, Cu, Ag, Au, Ni, Pd, Pt,
SOLIDS: Si, Ti, Ir, Nb, Mo, Ta, V, Pd,

Polarization techniques include:
Materials whose optical properties have been studied using
The spectral emissivity of tungsten at $\lambda = 1064$ (•) and $\lambda = 633$ nm (○) as a function of temperature. The data measured by De Vos at 1064 (+) and 633 nm (△) are shown for comparison.
Normal incidence spectral emissivity of liquid platinum as a function of temperature at 1064 (Δ), 633.8 (□), 514.5 (X), and 488 nm (O). Solid line represents the least squares fit to the data. Melting point indicated by arrow.
The normal spectral emissivity of Niobium as a function of temperature at 0.6328 μm.

- Liquid Niobium
- Solid Niobium
- Solid Niobium before clean up
- Values at Tm and 0.65 μm (D. W. Bonnell)