

Meeting Minutes (Draft 1)

ASC-OP/TF6: Infrared Materials

Wednesday, April 12, 2017 at SPIE's DCS
Platinum Ballroom 9, Anaheim Marriott, Anaheim, CA

CALL TO ORDER at 08:05 AM PDT

Adam Phenis, Chairman of TF6, called the meeting to order.

WELCOME AND INTRODUCTIONS

AMP Optics, Adam Phenis (Member)	Photonics Sense, Andreas Zickler (Observer)
ER Precision, Brian Weinberg (Member)	Photonics Sense, Eric Brambani (Observer)
ER Precision, Jason Hess (Member)	Photonics Sense, Tobias Delle (Observer)
II-VI Infrared, Alan Hedges (Member)	PNNL, Tanya Myers (Observer)
M3 Measurement, Erik Stover (Member)	PNNL, Tim Johnson (Observer)
NIST, John Burnett (Member)	Redwave Glass, Dani Mendenhall (Observer)
Self, Eric Herman (Member)	Redwave Glass, Robert Mendenhall (Observer)
Triptar, Allen Krisiloff (Member)	Umicore, Priyesh Narsale (Observer)
	Umicore, Yann Guimond (Observer)

Quorum Not Achieved: 7 out of 22 members present (7/22 < 50%)

RECORDING SECRETARY

Allen Krisiloff, Secretary of ASC OP

ADOPTION OF AGENDA

Motion by Eric Stover. Second by John Burnett. Passed 100%

APPROVAL OF PREVIOUS MEETING'S MINUTES (April 20, 2016)

Motion by Eric Stover. Second by John Burnett. Passed 100%

REFRACTOMETER MEASUREMENTS UPDATE

John Burnett presented preliminary results for his measurements of the refractive index of Ge from 2 to 14 microns at 22°C. The data below 3 microns is still under study because of band-edge absorption issues near 2 microns.

Between 2.25 and 14 microns, the overall uncertainty in index across the range is about 1×10^{-4} , and exceeds the stated goal and the previous published uncertainties by a factor of 10x.

Residuals when the data are fit to the 3-term Sellmeier function are less than 3×10^{-5} .

Parts of the new dispersion curve are shifted by 10 to 30×10^{-4} when compared to those published before 1978. It is possible that a large part of that big discrepancy can be attributed to lower material quality used in the older studies.

The new dispersion curve is shifted by only 1×10^{-4} when compared to curves published after 1978 but the error bars of uncertainty are much smaller. The new dispersion curve represents an improvement in confidence by nearly a factor of 10x.

John will revisit measurements made near the 2 micron band-edge. He plans to publish a paper towards the end of the year.

John also plans to start examining ZnSe later in the year, too. Homogeneity may pose a challenge.

STANDARDS PROJECTS

Allen Krisiloff reported that membership issues and the periodic 5-year audit conducted by ANSI, which is starting in May, will further delay ballots for the definition of spectral bands and the geometry of samples taken from boules. Those ballots should go out during the upcoming summer.

NEXT MEETING

SPIE's DCS in Orlando, FL in 2018.

Motion by Eric Stover. Second by John Burnett. 100% approved.

ADJOURNED at 09:30 am PDT

Motion by Eric Stover. Second by John Burnett. 100% approved.