

Second Workshop on Photocathodes: 300-500nm

June 29-30, 2012
Enrico Fermi Institute, University of Chicago

Agenda

Version 2.1, June 28, 2012

Welcome and Introduction		Karen Byrum (ANL)
8:30 - 8:45	Goals of the Workshop	Henry Frisch (UC)
Session 1: What are the fundamental limits for QE in Alkali-cathodes?		
8:45 - 9:25	What are the highest QE's measured so far?	Razmik Mirzoyan (MPI-Munich)
9:25 - 10:05	Determining parameters in the Spicer-Model and predicted maximum QE	John Smedley (BNL)
10:05 - 10:45	Minimizing negative and maximizing positive effects of electron scattering	Ines Montano (Sandia)
10:45 - 11:00	Coffee	
11:00 - 11:40	Influence of Structure and Composition on Conductivity and Optical Properties	Xiuling Li (UIUC)
11:40 - 12:20	Influence of Structure and Composition on QE	John Smedley (BNL) (TBC)
12:20 - 13:30	Lunch (complimentary- brought in from Siam Rest., 55th St.)	
Session 2: What has to be done to achieve a narrow distribution of the yield?		
13:30 - 14:00	Process Controls, Process Parameters, and Quality Control of Sources	Pascal Lavoute (Photonis) - call in
14:00 - 14:30	Overview and Critique on Design Concepts for Sources	Andy Cormack (ET Enterprises)
14:30 - 15:00	Getter Sources Versus Metallic Evaporation Sources	Charles Sinclair (Cornell)
15:00 - 15:15	Coffee	
Session 3: Can we make a PC in an MCP-detector using a "non-transfer" recipe?		
15:15 - 15:45	Open Slot for Targets of Opportunity or Need	TBA
15:45 - 16:15	Challenges in Photocathode Deposition for Large-area MCP Proximity-focus Devices	Oswald Siegmund (UCB/SSL)
16:15 - 16:45	Comparison of Evaporation, Sputtering, and CVD Techniques for Growth of Multi-Component Systems	Ray Conley (BNL)
16:45 - 17:15	Cathode Development in China	Sen Qian (IHEP)
18:00 - 20:00	Dinner at Cedars, 1206 E. 53rd St.; (773) 324-6227	

(OVER for Saturday's agenda)

Saturday June 30, 2012 8:30 am

8:30 - 8:40 Announcements

Organizers

Session 4: Crystal structure, Chemical Reaction, and Growth

08:40 - 09:10	Solid State Solutions, Phase Diagrams, and Phase Transitions	Matthew Highland (ANL/MSD)
09:10 - 9:40	In situ Measurement Tools	Jeffrey Elam (ANL/ESD)
9:40 - 10:10	Visualizing Crystal Growth and Solid State Chemistry During the Recipe	Miguel Ruiz Osés (Stony Brook)

10:10 - 10:30 Coffee

Session 5: The Nitty-Gritty of Growing High-QE Cathodes

What are the Most Important Parameters? (12 min + 3 discussion- \leq 5 slides) per speaker

10:30 - 10:45	The Role of Geometry	tbd
10:45 - 11:00	The Role of Cs	tbd
11:00 - 11:15	The Role of Sb	tbd
11:15 - 11:30	The Role of K, Na	tbd
11:30 - 11:45	The Role of the Substrate	tbd
11:45 - 12:00	The Roles of Temperature/Pressure	tbd
12:00 - 12:15	The Role of Co-evap, Diffusion, Stoichiometry	tbd
12:15 - 12:30	The Role of Contaminants	tbd
12:30 - 12:45	Summary of the Parameter Roles and Importance	tbd

Session 6: Summary

12:45-01:15	Summary and Assessment	Klaus Attenkofer
1:15	Workshop Ends	
