ICAP 2008

Book of Abstracts

XXI International Conference on Atomic Physics

Storrs, Connecticut, USA
July 27 - August 1, 2008

Book of Abstracts

Edited by

Michael G. Rozman, Winthrop Smith, Phillip Gould, Robin Côté
University of Connecticut

Storrs, Connecticut
www.phys.uconn.edu

Elastic Electron Scattering by Antimony Atom

B. P. Marinković[1,2], D. Šević[1,2], V. Pejčev[1,3], D. M. Filipović[1,4]

[1]*Institute of Physics, Pregrevica 118, 11080 Belgrade, Serbia*
[2]*The Advanced School of Electrical Engineering and Computing, 11000 Belgrade, Serbia*
[3]*Faculty of Natural Sciences, University of Kragujevac, 34000 Kragujevac, Serbia*
[4]*Faculty of Physics, University of Belgrade, P. O. Box 368, 11001 Belgrade, Serbia*

The low and intermediate energy electron scattering from metal atoms has been studied extensively recently. Detailed knowledge on the differential cross sections (DCSs) is important for understanding the basic interaction in the electron atom scattering processes.

A short review of our experimental work on electron interactions with metal atoms (Ca, Yb and Pb) has been published recently[1] Experimental and theoretical studies of elastic scattering by In and Ag atoms are on the way.[2]

The angular distribution of elastically scattered electrons was measured in the intermediate energy range up to 100 eV at scattering angles from 10^o to 150^o. The measurements were carried out using the perpendicularly crossed electron and atom beams. Electron spectrometer consists of hemispherical monochromator and analyzer. Elastically scattered electrons were analyzed and detected as a function of scattering angle at fixed electron-impact energy by a hemispherical electron energy analyzer and channeltron as a single-electron detector. Typical energy and angular resolutions were 60 meV and 2^o respectively.

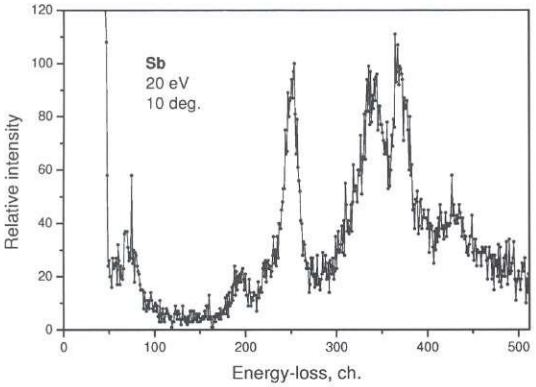

Figure 1: *Energy loss spectrum of antimony vapor obtained by heating of pure crystalline antimony at approximately 900 K.*

[1]B. P. Marinković, V. Pejčev, D. M. Filipović, D. Šević. S. Milisavljević, B. Predojević, Rad. Phys. Chem. 76 (2007) 455.

[2]M. S. Rabasović, V. I. Kelemen, S. D. Tošić, D. Šević, M. M. Dovhanych, V. Pejčev, D. M. Filipović, E. Yu. Remeta, and B. P. Marinković, Phys. Rev. A 77 (2008) accepted; S. D. Tošić et al. NIMB, (2008) submitted.

ICAP 2008 Conference Program

	Sun July 27	Mon July 28	Tue July 29	Wed July 30	Thu July 31	Fri Aug 1
		Precision Measure-ments	**Trapped Ions**	**Bose Gases**	**Optical Lattices**	**Mesoscopic Quantum Systems**
8:30		Kasevich	Blatt	Hulet	Porto	Harris
9:15		Gabrielse	Chuang	Pfau	Paredes	Kippenberg
9:45		Biraben	Drewsen	Weiss	Modugno	Yamamoto
10:15	**Arrivals**	Coffee 10:15-10:45	Coffee 10:15-10:45	Coffee 10:15-10:45	Coffee 10:15-10:45	Coffee 10:15-10:45
		Atomic Clocks	**Quantum Optics**	**Fermi Gases**	**Cold Molecules**	**Ultrafast Phenomena**
10:45		Udem	Haroche	Thomas	Pillet	DiMauro
11:30		Rosenband	Vuletic	Jin	Grimm	Young
12:00		Gibble	Stamper-Kurn	Drummond	Dürr	Dudovich
12:30		Lunch 12:30-2:00	Lunch 12:30-2:00	Lunch 12:30	Lunch 12:30-2:00	Lunch 12:30
	Nobel Session	**Quantum Information**	**Hot Topics I** 20 min. talks		**Hot Topics II** 20 min. talks	
2:00	Welcome Phillips (2:10) Cornell (2:45) Glauber (3:20)	Zoller (2:00) Kuzmich (2:45) Browaeys (3:15)	Ye Lukin Bouyer Inguscio Stwalley		Chin Oberthaler Shin Bloch Schoelkopf	
	Coffee 3:55-4:25	Coffee 3:45-4:15	Coffee 3:45-4:15	**Excursions**	Coffee 3:45-4:15	**Departure**
4:15	Chu (4:25) Meystre (5:00) Berman (5:20)	**Posters I** 4:15-6:00 *Wilbur Cross*	**Posters II** 4:15-6:00 *Wilbur Cross*		**Posters III** 4:15-6:00 *Wilbur Cross*	**Lab tours** **2:00-4:00**
6:00	**Reception**	Dinner	Dinner			
7:00	*Rome*				**Conference Dinner** *Rome*	
8:00		**Concert** *von der Mehden*	**Public Lecture** Ketterle			

All Talks: in Jorgensen Auditorium
All Posters: in Wilbur Cross Building