

SPIE Student Chapter at Ivan Franko National University of Lviv



<http://www.electronics.wups.lviv.ua:8102/stchapter>

Student Chapter Report

May 2007-December 2007

Name of Chapter:

SPIE Student Chapter at Ivan Franko Lviv National University

Person Completing Form/Contact:

Rostyslav Bilyy, Chapter President

E-mail: bilyy@txnet.com

Number of members: 30

Chapter Officers elected for the next Academic year:

President: Rostyslav Bilyy bilyy@txnet.com

Vice President: Myroslava Omelchenko o_myrosia@yahoo.com

Secretary: Vita Dmytruk vita_dmytruk@mail.ru

Treasurer: Oksana Drobchak oxdr@mail.ru

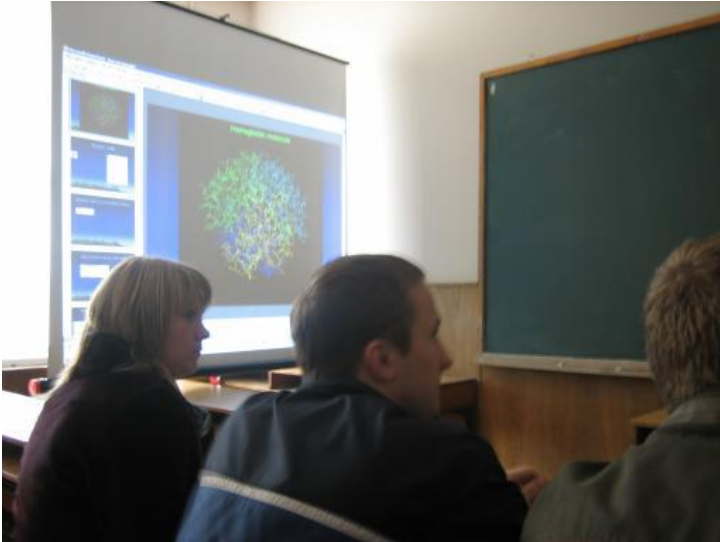
Chapter Advisor: Alexander Bilyi Bilyi@electronics.wups.lviv.ua

Chapter activities:

1. Chapter members Ivanna Yarynovska and Myroslava Omelchenko participated at the European Conferences on Biomedical Optics (ECBO) co-located with SPIE Europe Optical Metrology, 17 - 21 June 2007, Munich, Germany; where they presented their scientific works. They were supported by SPIE Student chapter travel grant. After arrival they made a presentation for chapter members about the results of their visit.
2. Students of the chapter, as well as other volunteer students from the University, studied the advanced course "Physical principles of biomedical methods for clinical diagnostics" taught by Chapter Advisor Dr. Alexander Bili. The development of course was supported by *2006 SPIE Educational Grant in Optical Science & Engineering*.
3. Student chapter members prepared and presented few presentations "Amazing optics" for younger students. Few other demonstrations are in preparation.
4. We continue our established scientific collaboration with SPIE Student Chapter at Wroclaw University. During the reporting period a few promising results were obtained and a joint article was accepted in *Physica E* (with IMPACT factor ~1.05): Bilyy R., Podhorodecki A., Nyk M., Stoika R., Zaichenko A., Misiewicz J., Streck W. Utilization of GaN : Eu³⁺ nanocrystals for the detection of programmed cell death / *Physica E: Low-dimensional Systems and Nanostructures*, 2007, in press; doi:10.1016/j.physe.2007.09.147.
5. Chapter activities were presented at OSA/SPIE Ukrainian Regional Chapter Meeting, Kharkiv, Ukraine, December 12-13, 2007.
6. Members – 2 new members in December 2007. We expect new members soon.
7. Meetings with the students of Ivan Franko Lviv National University, Lviv Polytechnic University and Lviv Medical University with the aim to promote SPIE activities.

8. During reporting period there were 5 Chapter meeting. The meetings are usually arranged last Thursday of the month (regular), additional meetings are arranged when needed.
9. Chapter members are activity involved in scientific work, some of their results were published at:
 1. Utilization of GaN : Eu³⁺ nanocrystals for the detection of programmed cell death. Bilyy R., Podhorodecki A., Nyk M., Stoika R., Zaichenko A., Misiewicz J., Strek W. / **Physica E: Low-dimensional Systems and Nanostructures**, 2007, in press
 2. Luminescence of thin films of bismuth and lead complex oxide compounds/ O. Bordun, I.Y. Kukharsky, V. Antonyuk and V. Dmytruk / **Radiation Measurements**, Volume 42, Issues 4-5, April-May 2007, Pages 569-571
 3. Light scattering application for bacterial cell monitoring during cultivation process. Igor Ya. Kotsyumbas, I. M. Kushnir, R.O. Bilyy, I.H. Yarynovska, V. B. Getman, and A.I. Bilyi / **Proc. SPIE** 6631, 66311I (2007).
 4. Optical spectroscopy of phosphatic urinary calculi. I. Yarynovska, A. Bili, / **Proc. SPIE** 6628, 66281C (2007)
 5. Method for quantitative determination of microbiological object during their cultivation process; Kushnir I.M., Kotsyumbas I.Ya., Bilyi O.I., Getman V.B., Bilyy R.O., **PCT Patent Application**, 2007, PCT/UA2007/000044.

Course “Physical principles of biomedical methods for clinical diagnostics”, taught by Chapter Advisor Dr. Alexander Bilyi



Promotion of Optics among 1st grade students

Demonstration of amazing properties of liquid crystals, done by Chapter members



Financial information:

Beginning balance - \$0.

Funds obtained from SPIE - \$1100.

Funds expended: \$1100

Details:

	\$
Participation in the ECBO	
Conferences, 2 members	415
Library subscriptions	225
Organization of optics	
presentations for students	75
Other (including bank expenses)	23
Total	738

Ending balance - \$362.