

# Mirvat Shamseddine

Riad El-Solh, AUB 1107 2020

Beirut, Lebanon

Tel: (961)71538452

[mos05@aub.edu.lb](mailto:mos05@aub.edu.lb)

## Education

Present American University of Beirut, Department of Mechanical Engineering. **PhD student**, enrolled as **Special Student** in February 2012.

### GRADUATE

2009-2012 American University of Beirut, Department of Physics. Overall GPA **94.16/100**, MS completed in **February 2012**.

Thesis Title: Optical Analysis of Boron Nitride Thin Films (FTIR Modeling)

### UNDERGRADUATE

2005-2008 Lebanese University, Department of Physics, Average: **73.12/100**, BS completed in June 2008.

Final Project: Ground Penetrating Radars.

## Research Experience

2010-2012 American University of Beirut, working on my MS Thesis under Prof M. Kazan. My work involves analysis and modeling of the infrared reflectivity from thin films. I am seeking to develop a computational code of an advanced and reliable theoretical model for the infrared reflectivity from anisotropic multi-layered system.

## Skill Interest

- Infrared characterization
- Numerical simulations and physical modeling of several aspects in condensed matter.

## Publications

- M. Shamseddine, M. Kazan, M. Tabbal, ***Model for the unpolarized infrared reflectivity from uniaxial polar materials: Effect of anisotropy, free carriers, and defects***, this paper has been accepted for publication in **Infrared Physics & Technology** on October 25 2011.

## Conferences, Presentations Attended

- CIMA Beirut 2011 Mediterranean Conference on Innovative Materials and Applications, Beirut, Lebanon, March 14th - 16th 2011, presented poster.

- European Materials Research Society (E-MRS) Conference, Nice, France, May 9th-13<sup>th</sup> 2011, oral presentation.
- CRSL Conference, Beirut, Lebanon, May 14, 2011, presented oral.
- DIAMOND 2011: 22nd European Conference on Diamond, Garmisch-Partenkirchen, Germany, September 4<sup>th</sup>-8<sup>th</sup> 2011, accepted as poster presentation.

## Conference Abstracts

- M. Shamseddine, M. Kazan and M. Tabbal, ***Analysis and Modelling of the Infrared Reflectivity from Thin Films***, under the topic *Characterization techniques and properties* (CIMA).
- M. Shamseddine, M. Kazan and M. Tabbal, ***The role of the substrate in optimizing h-BN layers investigated by modeling the infrared reflectivity***, under the topic *Group III nitrides and their heterostructures* for electronics and photonics applications (E-MRS).
- M. Shamseddine, M. Kazan and M. Tabbal, ***Infrared analysis and modeling of thin films*** (CRSL).
- M. Shamseddine, M. Kazan and M. Tabbal, ***Investigation of the role of substrate for high-quality h-BN layers by FTIR modeling***, under the topic *III-nitrides: growth properties and applications* (Diamond).

## Teaching Experience

2009-2012	American University of Beirut, Laboratory Instructor & TA: full responsibility for 9 Lab courses (PHYS205L, PHYS210L)  Mechanics, Electricity and Magnetism, Classical Physics for Life Science
2006-present	Tutoring Physics and Engineering sophomore and junior students (3+ students per semester)

**Computer Skills** Microsoft Office: Word, Excel, PowerPoint; Origin; MATLAB 2010, C/C++

---

**References** Prof M. Kazan ([mk140@aub.edu.lb](mailto:mk140@aub.edu.lb)), Prof M. Tabbal ([mt03@aub.edu.lb](mailto:mt03@aub.edu.lb))  
Prof H. Zaraket ([hzaraket@ul.edu.lb](mailto:hzaraket@ul.edu.lb))