

CURRICULUM VITAE

BACKGROUND DATA

- **Name** : Safwat William Zaki Mahmoud
- **Birth Date** : 01.01.1966.
- **Married** : Yes: No:
- **Current Job** : Lecturer
- **Mailing Address** : Department of Physics, Faculty of Science, Minia University, 61915 El-Minia, Egypt.

- **Telephone** : 02-086-2339293
- **Mobil** : 0163301969
- **Fax** : 02-086-234 2601
- **E-mail** : safwatwilliam@yahoo.com

UNIVERSITY EDUCATION

- Ph.D. degree (Very Good), June 2002, Optoelectronic Department, Faculty of engineering, Ulm University, Ulm, Germany.

Dissertation:

"Static and Dynamic Transverse mode Characteristics of Vertical-Cavity Surface-Emitting Semiconductor Lasers"

http://vts.uni-ulm.de/docs/2002/1622/vts_1622.pdf

- M.Sc. degree, Physics, 1994, Department of Physics, Faculty of Science, Minia University, El-Minia, Egypt.

Dissertation:

"A study on the nuclear optical potential"

- B.Sc. Physics (Excellent 89.6%), 1989, Department of Physics, Faculty of Science, Minia University, Egypt.

ACADEMIC AND ADMINISTRATIVE EXPERIENCE

Title	From - To	University	Country
Assistant Professor	2003 Till now	Minia	Egypt
Research Assistant	1997-2002	Ulm	Germany
Lecturer	1994-1996	Minia	Egypt
Teaching Assistant	1990-1994	Minia	Egypt

HONORS: (NAMES AND DATES OF PROFESSIONAL HONORS, AWARDS, FELLOWSHIPS AND SCHOLARSHIPS)

Names	Dates
Egyptian scholarship for five years in, Optoelectronics Department, Ulm University, Germany	From 1997 to 2002

PROFESSIONAL SOCIETIES

- Member of the **Egyptian Materials Research Society (Eg-MRS)**.
- Implementation Manager of the project "**Enhancing Modeling and Simulation Technology in Training and Education of B.Sc. Physics students in Minia University**", funded by the Egyptian Ministry of Higher Education Enhancement Project Fund (HEEPF).
<https://mitdbmina.edu.eg/projects/heepf/mgalal/index1.htm>
- Team Member for implementing the project "**Quality Assurance and Accreditation of Higher Education in Minia University**",
- Team member of the research project "**Selective Coating**", funded by the Egyptian Academy of Science and Technology and under implementation in Physics Department, Helwan University, Egypt.

LANGUAGES/ SPECIAL SKILLS

Arabic	Speaking √	Reading √	Writing √
English	Speaking √	Reading √	Writing √
German	Speaking √	Reading √	Writing √
Others			
Computer Skills	Windows XP, Microsoft Office XP, Latex, graphic programs, Internet, Web Site design, Electronic Workbench, e-learning, Mat lab, MathCAD, and FORTRAN Language.		

COURSES & LAB TAUGHT

UNDERGRADUATE COURSES

Laser Physics, Light and Optics, Fiber-Optic Communication Systems, Electronic Optics, Computation Physics, Semiconductors, Electronics, General Physics (Heat, Properties of Matter, Wave motion, Electricity, and Mechanics) and Modern Physics.

UNDERGRADUATE LAB

OPTICS: Geometrical Optics (Lenses and Mirrors), Optical Microscopes, Physical Optics (Diffraction and Interference of Light, Grating Diffraction, Polarization of Light), Photoelectric Cells.

ELECTRONICS: PN junction Characteristics and applications, Different Transistor Configuration Characteristics and applications, Integrated Circuits (ICs) and applications, RC Oscillators, Multivibrators, Maximum Power Transfer theory, Gas Filled Diode Characteristics, Motion of Electrons in Electric and Magnetic Fields, Resonance Circuits, Electronic Filters, Triode Characteristics and its application as an amplifier.

GRADUATE COURSES & LAB

Laser Physics and its Applications

LIST OF PUBLICATIONS

1. M. Ahmed, **Safwat W. Z. Mahmoud**, and M. Yamada " A Numerical Analysis of Optical Feedback Phenomenon and Intensity Noise of Fiber-Grating Semiconductor Lasers ", *International Journal Of Numerical Modelling*, **20: 117-132, 2007**.
2. M. Ahmed, M. Yamada, and **Safwat W. Z. Mahmoud** "Analysis of Semiconductor Laser Dynamics under Gigabit Rate Modulation", *Journal of applied Physics* **101, 033119 (2007)**.
3. **S.W.Z. Mahmoud**, M.F. Ahmed and R. Michalzik, " Influence of fiber-facer reflectivity on operation Characteristics of Vertical-Cavity Surface-Emitting Lasers", *XXV Conference on Solid State Physics and Materials Science & workshop on Photonic Materials and Optoelectronic Devices (II)*, Luxor, Egypt, March 2005.
4. **Safwat W.Z. Mahmoud**, Moustafa F. Ahmed, Maysa. A. Kaied, "Synthesis of multilayer and waveguide filters for use in optical communication systems", *Egyptian Journal of Solids*, Vol. (28), No. (1), (2005).
5. M. Ahmed, **Safwat W. Z. Mahmoud** and M. Yamada, "Operation Characteristics and Intensity Noise of Semiconductor Lasers Pumping Fiber Amplifiers", *The AIUB Journal of Science and Engineering*, vol. 3, No. 1, pp.1-6, 2004.
6. **S.W.Z. Mahmoud** and R. Michalzik, " Oxide Confined Vertical-Cavity Surface-Emitting Laser Diodes for Optical Fiber Communications", *XXIV Conference on Solid State Physics and Materials Science & workshop on Photonic Materials and Optoelectronic Devices*, Safaga, Egypt, February 2004.
7. **Safwat. W. Z. Mahmoud**, M. Ahmed, and R. Michalzik, "Coupling Efficiency of VCSELs into Single- and Multi-mode Optical Fibers", *Proceedings of the Second Saudi Science Conference*, Jeddah, Saudi Arabia, March, 2004.
8. Moustafa F. Ahmed and **Safwat W.Z. Mahmoud**, "Operation Stability of Semiconductor Lasers in Optical Fiber Communication Systems", *Proceedings of the Second Saudi Science Conference*, Jeddah, Saudi Arabia, March, 2004.
9. **Safwat W. Z. Mahmoud**, M. Ahmed and R. Michalzik, "Influence of optical feedback-induced phase on turn-on dynamics of vertical-cavity surface-emitting lasers", *Proceedings of the 46th IEEE Midwest Symposium on Circuits and Systems*, Vol. 3, pp.1354-1358, 2003.
10. M. Ahmed, **Safwat W. Z. Mahmoud**, and M. Yamada "Influence of the Spectral Gain Suppression on the Intensities of Longitudinal Modes in 1.55 μm InGaAsP Lasers", *Egyptian Journal of Solids*, vol. 26, No. 2, pp. 205-224, 2003.
11. **S. W. Z. Mahmoud**, M. Ahmed, M. Kaied and K. Abdelhady, "Proposal of multilayer and waveguide-based reflection filters with bandwidth less than 1 nm for use in wavelength-division-multiplexed optical communications", *Proceedings of the 3rd Arab Conference on Material Science ACMS-III*, pp. 51-65, Hurghada, Egypt, 2003.
12. **Safwat W.Z. Mahmoud**, "Vertical-Cavity Surface-Emitting Lasers and Generation of a new Optoelectronic field", in One Day Seminar On "Photonic Materials and Optoelectronic Devices" Helwan Univ. Ain Helwan, Cairo, October 2003.
13. R. Michalzik, K.J. Ebeling, M. Kicherer, T. Knödl, **S.W.Z. Mahmoud**, F. Mederer, M.

- Riedl, H. Roscher, M. Stach, H.J. Unold, "VCSEL Technologies for datacom", in Proc. 3rd int. Conf. on Optics-Photonics Design and Fabrications, ODF 2002, pp. 33-34, Tokyo, Japan, Oct./Nov. 2002.
14. Heiko J. Unold, **Safwat W.Z. Mahmoud**, R. Jäger, M. Golling, Max Kicherer, Felix Mederer, Michael C. Riedl, T. Knödl, M. Miller, R. Michalzik and K.J. Ebeling, "Single-Mode VCSELs", in Vertical Cavity Surface Emitting Lasers IV , SPIE Proc. Vol. 4649, pp.218-229, San Jose, CA,USA, January (2002).
 15. **S.W.Z. Mahmoud**, D. Wiedenmann, M. Kicherer, H.J. Unold, R. Jäger, R. Michalzik, and K.J. Ebeling, "Spatial Investigation of Transverse Mode Turn-On Dynamics in VCSELs", IEEE Photonics Technol. Lett., vol. 13, pp. 939, (2001).
 16. Heiko J. Unold, **Safwat W.Z. Mahmoud**, R. Jäger, M. Grabherr, R. Michalzik and K.J. Ebeling, "Large-Area Single-Mode VCSELs and the Self-Aligned Surface Relief ", IEEE Journal on selected topics in quantum electronics, vol. 7, pp.386-392, (2001).
 17. **S.W.Z. Mahmoud**, H. Unold, W. Schmid, R. Jäger, R. Michalzik, and K.J. Ebeling, "Analysis of longitudinal mode wave guiding in vertical-cavity surface-emitting lasers with long monolithic cavity", Appl. Phys. Lett., vol. 78, pp. 586-588, 2001.
 18. H.J. Unold, M.C. Riedel, **S.W.Z. Mahmoud**, R. Jäger, and K.J. Ebeling, "Long monolithic cavity VCSELs for high singlemode output power", Electronics Letter, vol. 37, pp. 178, (2001).
 19. H.J. Unold, **S.W.Z. Mahmoud**, R. Jäger, R. Michalzik, and K.J. Ebeling, "Spatially varied anti-resonant DBR design for large-area single-mode VCSELs", in Proc. IEEE International Semiconductor Laser conference, pp. 57-58, Monterey, CA, USA, Sept. (2000).
 20. H.J. Unold, **S.W.Z. Mahmoud**, F. Eberhard, R. Jäger, and K.J. Ebeling, "Large-area single-mode VCSELs: approaches and experimental", in Vertical Cavity Surface Emitting Lasers IV , SPIE Proc., vol. 3946, pp. 207-218, San Jose, CA, USA, January (2000).
 21. H.J. Unold, **S.W.Z. Mahmoud**, R. Jäger, M. Kicherer, M.C. Riedl, and K.J. Ebeling, "Improving single-mode VCSEL performance by increasing a long monolithic cavity", IEEE Photonics Technol. Lett., vol. 12, pp. 939, (2000).
 22. **S.W.Z. Mahmoud**, H.J. Unold, W. Schmid, and K.J. Ebeling, "Analysis of longitudinal lasing modes in long cavity VCSELs", in Proc. Semiconductor and Integrated Optoelectronics, SIOE 2000, Cardiff, United Kingdom April 2000.
 23. S.A.E. Khalaf, M.A. Abdel-Rahman, S.K. Abdel-Raheem, **S.W.Z. Mahmoud**, "Elastic Scattering of 344.5 MeV ¹²C Ions From ¹¹B Nucleus", Tr. J. of Physics, Vol 22, pp. 219-226, 1998.
 24. Sayed Khallaf, Mamdouh Abdelrahman, Saad Abdelraheem, **Safwat Mahmoud**, "Elastic Scattering of ¹²C by ¹²C at Intermediate Energies", Jpn. J. Appl. Phys. Vol. 37, pp. 657-663, 1998.