

# CURRICULUM VITAE

**Fatma Abd El-Samad Saad**



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## Academic Degrees

- 2022 M. Sc. in **Experimental Laser Physics (Nonlinear Optics)**, Laser Institute for Research and Applications (LIRA), Beni-Suef University, Beni-Suef, Egypt.
- 2017 B. Sc. in **Physics and Chemistry**, Beni-Suef University, Egypt.

## Academic Positions

1. PhD. student, Laser Interaction with Matter Department, Laser Institute for Research and Applications (LIRA), Beni-Suef University, Egypt, from 16/9/2022 till now.
2. M.Sc. student, Laser Interaction with Matter Department, Laser Institute for Research and Applications (LIRA), Beni-Suef University, Egypt, from 1/11/2018 to 16/9/2022.
3. Teaching Assistant, Laser Institute for Research and Applications (LIRA), Beni-Suef University, Egypt from 1/11/2018.

## Master's thesis title

Using ultrashort laser pulses to measure the nonlinear optical properties of ITO thin film

إستخدام نبضات الليزر فائق القصر لقياس الخواص البصرية الغير خطية لغشاء أكسيد أنديوم القصدير

## **Publications**

1. **Fatma Abd El-Samad**, Alaa Mahmoud, Mohamed Shaaban Abdel-Wahab, Wael Z. Tawfik, Rozalina Zakaria, Venugopal Rao Soma, and Tarek Mohamed," Investigating the influence of ITO thin film thickness on the optical Kerr nonlinearity using ultrashort laser pulses," **Journal of the Optical Society of America B**, Vol. 39(5), p. 1388-1399, Apr.(2022).
2. Shaimaa Mohamed, **Fatma Abdel Samad**, Mohamed Ashour, M. Sh. Abdel-Wahab, Wael Z. Tawfik, Venugopal Rao Soma, and Tarek Mohamed, " Enhanced and tunable femtosecond nonlinear optical properties of pure and nickel doped zinc oxide films," **J. Applied Optics**, 61(25), 7283-7291 (2022).
3. Wafaa R. Mohamed, Nora Mahmoud, **Fatma Abdel Samad**, Esraa Ahmed, Michael R. Hamblin, and Tarek Mohamed," Rapid monitoring of serum albumin as a biomarker of liver and kidney diseases using femtosecond laser-induced fluorescence," **J. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**, 268, 120646 (2022).
4. Samar Reda Al-Sayed, **Fatma Abdel Samad**, Tarek Mohamed, and Doaa Youssef," Novel surface topography and microhardness characterization of laser clad layer on TC4 titanium alloy using laser-induced breakdown spectroscopy and machine learning," **J. Journal of Metallurgical and Materials Transactions A**, 1-15 (2022).
5. **Fatma Abdel Samad**, M. Sh. Abdel-Wahab, Wael Z. Tawfik, H. Qayyum, Retna Apsari, and Tarek Mohamed, " Thickness-dependent nonlinear optical properties of ITO thin films,. **Optical and Quantum Electronics**, 55(8), 753 (2023).
6. **Fatma Abdel Samad** and Tarek Mohamed," "Intensity and wavelength-dependent two-photon absorption and its saturation in ITO film." **Applied Physics A** 129, no. 1 (2023): 31.
7. Karim Mousa, **Fatma Abdel Samad**, Tarek Mohamed, and Mohamed E. El-Khouly. "Cationic porphyrin-functionalized graphene oxide: A novel platform for ultrafast femtosecond nonlinear optical limiting." **Journal of Colloid and Interface Science** (2025): 137549.
8. **Fatma Abdel Samad**, Alaa Mahmoud, Mohamed E. El-Khouly, Retna Apsari, and Tarek Mohamed. "Nonlinear optical studies of perylenediimide nanowires using femtosecond laser pulses for optical limiter application." **Journal of Molecular Liquids** 418 (2025): 126679.

**Google scholar link**

<https://scholar.google.com/citations?user=21-PgVIAAAAJ&hl=ar>

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