CURRICULUM VITAE

Associate Prof. Kamel A. K. GADALLAH

PERSONAL INFORMATION

Date of birth 15/10/1971
Nationality Egyptian
Address AL-Azhar University
Faculty of Science, Astronomy Dept.
Nasr city, 11884, Cairo, Egypt

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Marital status Married

Computer skills IDL, Fortran, python, others

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Research interest Astrophysics & Space Physics:

QUALIFICATIONS

2010 **PhD in Physics** (Astrophysics): entitled "Structure and Optical Properties of Cosmic Nanoparticles: UV irradiation and Thermal Processing of Carbonaceous Materials" Friedrich-Schiller-University Jena, **Germany**

2001 **M.Sc. (Astronomy)** entitled "Ionization State within Interstellar Clouds" Cairo University, Cairo, **Egypt**

1997 **Postgraduate courses** in Astrophysics: Cairo University, **Cairo**, **Egypt**

1994 **B.Sc. in Astronomy & Meteorology**: Al-Azhar University, Cairo, **Egypt**

POSITIONS

2019 (16th-30th Sep.) **Visitor:** CY Cergy Paris University, Paris, **France**

2018 (11th Feb–11th Nov) **Postdoctoral position:** CY Cergy Paris University, Paris, **France**

2017 - **Associate Professor**, Astronomy Dept., Faculty of Science, Al-Azhar University, **Egypt**

2015 **Visitor**, Heriot-Watt University, **UK**

2012 - 2017 **Lecturer:** Astronomy Dept., Faculty of Science, Al-Azhar University, **Egypt**

2010 – 2011 **Postdoctoral position:** AIU, Friedrich-Schiller-University Jena**, Germany**

2006 -2010 **Doctoral Scholarship:** AIU, Friedrich-Schiller-University Jena, **Germany**

2001-2006 **Assistant Lecturer:** Astronomy. Dept., Faculty of Science, Al-Azhar University, **Egypt**

1997-2001 **Demonstrator:** Astronomy Dept., Faculty of Science, Al-Azhar University, **Egypt**

1995-1997 **Researcher assistant:** Helwan Observatory, Cairo, **Egypt**

LIST OF PUBLICATIONS

PAPERS

20 **K. A. K. Gadallah**, A. Sow, E. Congiu, S. Baouche, F. Dulieu, Variation of the sticking of methanol on low temperature surfaces as a possible obstacle to freeze out in dark clouds, **MNRAS**, Volume 494, Issue 3, Pages 4119–4129, **2020** https://doi.org/10.1093/mnras/staa862

19 A. Shokry, Th. Rivinius, A. Mehner, C. Martayan, W. Hummel, R. H. D. Townsend, M. A. Hamdy, M. M. Beheary, **K. A. K Gadallah**, and M. S. Abo-Elazm, Stellar parameters of Be stars observed with X-shooter, **Astronomy & Astrophysics** , 609, A108, **2018.**
DOI: https://doi.org/10.1051/0004-6361/201731536

18 A. Shokry, S. M. Saad , M. A. Hamdy, M. M. Beheary, M. S. Abolazm, **K. A. Gadallah**, M. H. El-Depsey, M. S. Al-Gazzar, Photometric Study of Two Eclipsing Binary Stars: Light Curve Analysis and System Parameters for GU CMa and SWASP J011732.10+525204.9, **New Astronomy,** 59, 8–13, **2018**.
DOI: 10.1016/j.newast.2017.08.005

17 A. Mouner, A. M. K. Shaltout, M. M. Beheary, **K. A. K. Gadallah**, KA Edris, Estimating the coronal and chromospheric magnetic fields of solar active regions as observed with the Nobeyama Radioheliograph Compared with the Extrapolated Linear Force-Free, Journal of **Astrobiology & Outreach**, 6, 160, **2018**
DOI: 10.4172/2332-2519.1000160

16 A. M. Ali, **K. A. K. Gadallah**, M. M. Beheary, Abdelrazek M. K. Shaltout, SED models of PAHs in the mid-IR band under interstellar medium conditions, The 9th International Conference for Basic Sciences, Faculty of Science, Al-Azhar University, 27 – 29 March, **2017**, Cairo, Egypt.

15 **Kamel A. K. Gadallah**, Demian Marchione, Sven P. K. Koehler and Martin R. S. McCoustra, Molecular Hydrogen Production from Amorphous Solid Water during Low Energy Electron Irradiation, ***Physical Chemistry Chemical Physics***, 19, 3349-3357, **2017.**
DOI: 10.1039/C6CP06928B

14 I Zead, SM Saad, MR Sanad, MM Behary, **K Gadallah**, Spectral and photometric behavior of SU UMa during quiescence and outburst states, **New Astronomy,** 52, 122-132, **2017**
DOI:10.1016/j.newast.2016.10.010

13 M. S. Darwish, M. S. Saad, M. A. Hanna, M. A. Nasser, M. A. Hamdy, M. M. Beheary, **K. A. Gadallah**, A. Shokry, New CCD photometry of the eclipsing binary system V1067 Her, **New Astronomy**, 50, 12-18, **2017** DOI:10.1016/j.newast.2016.06.005

12 M. S. Darwish, M. M. Elkhateeb, M. I. Nouh, S. M. Saad, M. A. Hamdy, M. M. Beheary, **K Gadallah**, I. Zaid, Orbital solution and evolutionary state for the eclipsing binary 1SWASP J080150.03+471433.8, **New Astronomy,** 50, 37-42, **2017.** DOI:10.1016/j.newast.2016.07.007

11 M. S. Saad, M. S. Darwish, M. A. Nasser, M. A. Hamdy, M. M. Beheary, **K. Gadallah**, D. Fouda, The first CCD photometric analysis and modeling for short period eclipsing binary system 1SWASPJ210423.7+073140.4., **New Astronomy**, 47, 24–28, **2016**
DOI:10.1016/j.newast.2016.02.001

10 **Kamel A. K. Gadallah**, Hydrocarbon analogs of cosmic dust to trace the solid carbon abundance in the interstellar medium, **Advances in Space Research**, 55(2), pp. 705-715, **2015**.
doi: http://dx.doi.org/10.1016/j.asr.2014.10.022

9 **Kamel A. K. Gadallah**, Nano-structural characterizations: Elongation of graphene layers within solid hydrocarbons, **Physical Science International Journal**, 5(2), 123-136, **2015**.
DOI : 10.9734/PSIJ/2015/13453

8 **Kamel A. K. Gadallah**, Thermal-processing of carbon dust around a cool star, **Al Azhar Bulletin of Science**, Vol. (25), No. 1, June, 1-6, **2014**. DOI: 10.21608/absb.2014.22659

7 **Kamel A. K. Gadallah**, Harald Mutschke, Cornelia Jäger, Analogs of solid nanoparticles as precursors of aromatic hydrocarbons, **Astronomy & Astrophysics**, 554, A12, **2013**.
https://doi.org/10.1051/0004-6361/201220895

6 **Kamel A. K. Gadallah**, Harald Mutschke, Cornelia Jäger, Mid-infrared spectroscopy of UV irradiated hydrogenated amorphous carbon (HAC) materials, **Astronomy & Astrophysics**, 544, A107, **2012**.
https://doi.org/10.1051/0004-6361/201219248

5 **Kamel A. K. Gadallah**, Harald Mutschke, Cornelia Jäger, UV-irradiated hydrogenated amorphous carbons (HACs) as carriers of the interstellar UV bump, **EAS Publications Series** 58 (**2012**), 389-393.
http://www.easJurnal.org/action/displayAbstract?fromPage=online&aid=8838223

4 **Kamel Gadallah**, H. Mutschke, and C. Jäger, UV irradiation of hydrogenated amorphous carbon (HAC) as a carrier candidate of the interstellar UV bump at 4.6 μm^{-1}, **IAU Symposium, volume 280 of IAU Symposium**, page 210P, May **2011**.
http://adsabs.harvard.edu/abs/2011IAUS..280P.210G

3 **Kamel A. K. Gadallah**, Harald Mutschke, Cornelia Jäger, UV irradiated hydrogenated amorphous carbon (HAC) materials as a carrier candidate of the interstellar UV bump at 217.5 nm, **Astronomy & Astrophysics**, 528, A56, **2011**. https://doi.org/10.1051/0004-6361/201015542

2 O. M. Shalabiea, **K. A. Khalil**, M.S. EL-Nawawy, Ionization State in PDR (IC 63 nebula), **Astrophysics & Space Science**, 289 (1-2): 77-93, **2004**.
https://doi.org/10.1023/B:ASTR.0000009392.55444.55

1 **K. A. Khalil Gadallah**, O.M. Shalabiea, M.S. EL-Nawawy, Ionization State in the Dense cloud NGC2264", Chem 2, held in Cairo, Egypt, **2002**, 459-467.

LIST OF CONFERENCES

4 The 9th International Conference for Basic Sciences, Faculty of Science, Al-Azhar University, 27 – 29 March, **2017**, Cairo, **Egypt**

3 **K. Gadallah**, H. Mutschke, and C. Jäger, Poster: UV irradiation of hydrogenated amorphous carbon (HAC) as a carrier candidate of the interstellar UV bump at 4.6 μm^{-1}, May 30-June 3, **2011**, **Toledo, Spain**.

2 **Kamel Gadallah**, Harald Mutschke, Cornelia Jäger, PAHs and the Universe conference, Poster: UV irradiation makes hydrogenated amorphous carbons (HACs) be a carrier candidate of the interstellar UV bump at 217.5 nm, **2010** (May 31st - June 4th), **Toulouse, France**.

1 **Kamel Gadallah**, Harald Mutschke, Cornelia Jäger, Poster: Hydrogenated Amorphous Carbons (HACs) as analog of interstellar dust grains, Cosmic Dust-Near&Far, **2008** (Sept. 8th -12th), **Heidelberg, Germany**.

WORKSHOPS ورش العمل

5 International Workshop on Oxygen in Space, Université de Cergy-Pontoise, October 16-17, **2018**, Paris, **France**

4 Workshop of Recent Trends in Astronomy and Space Sciences, 22nd-23rd Oct. **2013**, Helwan observatory, Cairo, **Egypt**.

3 Laboratory Astrophysics external Retreat, 15th-16th October **2010**, Eisenach, **Germany**.

2 Laboratory Astrophysics Workshop, 21st – 22nd January **2008**, Freyburg, **Germany.**

1 School/Workshop of the Total Solar Eclipse, 22nd Mar.- 6th Apr. **2006**, Bibliotheca of Alexandrina, Alexandrina, **Egypt**.

TEACHING COURSES

1998-2006 ***Exercises***: Astrophysics, Interstellar matter , General astronomy, Spherical astronomy

2012-current ***Lectures:*** Astrophysics, Interstellar matter, Planetary atmospheres, Variable stars

AWARDS Sultana N. Nahar Prize of the best research in astronomy for the academic year 2014-2015 (Distinction in Astronomy Research)
http://www.astronomy.ohio-state.edu/~nahar/physstem-alazharu.html#awardees

Google scholar *h* Index: 4 Citations: 122
http://scholar.google.com.eg/citations?user=kOwAKQgAAAAJ&hl=en

Scopus *h* Index: 4 Citations: 77
http://www.scopus.com/authid/detail.url?authorId=37002454300

GENERAL INTEREST in Astrophysics

- Astrochemical abundances and ionization states in the interstellar medium (ISM).
- Spectroscopic analysis of spectral observations of stars and galaxies: The spectral energy distribution (SED) in multi-wavelengths (X-ray, UV to IR bands).
- Experimental simulation of the cosmic matter: Condensation and characterizations (within ultra-high vacuum) to investigate spectroscopically its astrophysical signatures.
- Processing of interstellar matter by electron/UV/ Hydrogen irradiation.
- Thermal- processing within high/ultra-high Vacuum.
- Cosmic dust grains (processing and modelling) within hot and cold space environments.
- Physics and chemistry of complex molecules on ice-surfaces within the interstellar space. (*currently*)
- The morphology of the galactic disk of AGN galaxies: multi-wavelengths SED of the galactic matter affected by the scattered X-rays around the AGN. (*currently*)

METHODOLOGY

- Modeling: UMIST model (Chemical and contraction model of interstellar medium),
  DustEM code (SED of dust emissions),
  Cigale code (SED of galaxies and galactic medium emissions).
- Experimental production of nano- materials (thin films, nanoparticles) by laser ablation and vapor condensation
- Laboratory simulation of cosmic nano- materials in Ultra-High Vacuum (UHV).
- Thermal processing, UV irradiation, low energy- electron irradiation.
- Spectroscopic analysis of experimental and interstellar spectra.
- Transmission electron microscope (TEM).

SCIENTIFIC PROJECTS

1- PI of STDF Project (ID: 6119)

Forming complex carbonaceous molecules under space conditions

Science & Technology Development Fund

Ministry of Scientific Research

Al-Azhar University Faculty of Science

Heriot-Watt University, UK

2- PI of STDF Project (ID: 30565) (Current work)

Title: Physics and chemistry on the surface of interstellar grains

Place of **implementation:** LERMA Lab., Cergy-Pontoise University, France within the framework of the Egypt-France Cooperation Program (STDF - IFE).

Science & Technology Development Fund

Ministry of Scientific Research

Al-Azhar University Faculty of Science

LERMA, Cergy-Pontoise University, France