

SUSANA IGLESIAS GROTH



EDUCATION

- 1990** Graduated in Physics, **Specialty Astrophysics**. Universities Granada and La Laguna.
1990-2003 Teacher of Physics, Chemistry and Mathematics in High school
2003 **PhD in Molecular Astrophysics, University of La Laguna**

POSITIONS

IAC Post Doctoral Researcher (2003)
Last position: Euclid Postdoctoral contract at IAC (1-11-2016- 30-4-2018)

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Summary of Research :

Study of complex carbon molecules in the interstellar/circumstellar medium with the aim to establish their contribution to prebiotic chemistry and to several intriguing astrophysical phenomena (interstellar extinction features and anomalous microwave emission).. I have carried out research on the physical and chemical properties of fullerenes and studied their role on the extinction of radiation in the interstellar medium, the origin of diffuse interstellar bands, the origin of the recently discovered anomalous microwave emission in our Galaxy and on the formation of organic material, particularly prebiotic molecules, in molecular clouds. I work on the search and identification of polycyclic aromatic hydrocarbons (PAHs) and other forms of hydrogenated carbon molecules (fulleranes) in interstellar space, to investigate the role of these molecules on the formation of amino acids and other prebiotic molecules and to establish their contribution to astrophysical phenomena. I am member of the Euclid consortium with a goal to use the mission spectroscopic data to study the early evolution of carbon-based molecules in the Universe.

In this line I have focused my study on Bright Submillimetre Galaxies at high redshift. The main objective is to trace the evolution over time of complex carbon molecules either by measuring PAHs emission as a function of redshift or measurement of 217.5 nm UV bump with redshift. I am studying also the anomalous microwave emission in these galaxies using data from the VLA.

REFEREED PUBLICATIONS*

* Most can find them in *ads* (fields: *Astrophysics and Physics*).

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- (3) **Iglesias Groth, S. , Bretón, J.**
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- (4) **Iglesias-Groth, S., Ruíz,A.,Bretón, J., Gómez LLorente,J.M.**
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- (6) **Iglesias-Groth S.**
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- (7) **Iglesias-Groth S.**
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- (8) **Iglesias-Groth S.**
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- (9) **Iglesias-Groth S.**
Fullerenes and the lambda 4430 Diffuse Interstellar Band
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- (10) **Cataldo, F., Strazzulla, G., Iglesias-Groth, S.**
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- (11) **Iglesias-Groth S., Manchado A., García-Hernández D. A., Gonzalez Hernández J. , D. L. Lambert**
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"Synthesis of polyphenylacetylene by radiation-induced polymerization in deoxycholic acid clathrate"
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- (41) **Franco Cataldo, Giancarlo Angelini, Yaser Hafez & Susana Iglesias-Groth,**
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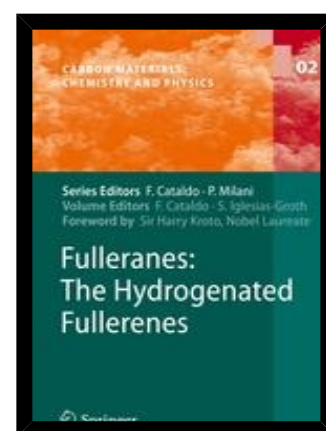
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Far Infrared spectroscopy of protogenic and other less common amino acids



Book

F. Cataldo, S. Iglesias-Groth (Editors and co-authors)
“FULLERANES: THE HYDROGENATED FULLERENES” published in May 2010 by Springer, Berlin, Germany. (Preface by Prof. Kroto, Chemistry Nobel Prize 1996)

Book chapter authorship:

S. Iglesias-Groth, F. Cataldo
PREFACE, of “Fulleranes: the Hydrogenated Fullerenes”, Springer, Berlin

S. Iglesias-Groth, F. Cataldo

Chapter 1, book “*Fulleranes: the Hydrogenated Fullerenes*”, Springer, Berlin
FULLERANES AND CARBON NANOSTRUCTURES IN THE INTERSTELLAR MEDIUM

F. Cataldo, S. Iglesias-Groth

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THE POTENTIAL ROLE PLAYED BY FULLERENE-LIKE STRUCTURES OF INTERSTELLAR CARBON DUST IN THE FORMATION OF MOLECULAR HYDROGEN IN SPACE

F. Cataldo, S. Iglesias-Groth, A. Manchado

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SYNTHESIS STABILITY AND SPECTROSCOPY OF PERDEUTEROFULLERANES: $C_{60}H_{36}$ AND $C_{70}H_{38}$. EVIDENCES OF ISOTOPE EFFECTS.

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PRIZES

PREMIO CARTAGONOVA A LA MUJER ASTROFÍSICA **CARTAGONOVA PRIZE TO WOMEN ASTROPHYSICS**

(Awarded July 4th, 2012)

(Chairman of the Jury: Prof. E. Battaner)

The award valued his innovative research and the merit of developing his doctoral thesis and research, simultaneously with the education of his four children and his work in high school
<http://www.iac.es/divulgacion.php?op1=16&id=753>