



Prof. Carolina Aguiar Punal BSc, MSc,
Professor of Quantum Chemistry and Spectroscopy and pedagogical formation

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QUALIFICATIONS

Bachelor of Science (B.Sc): Chemical Science, [Central University of Las Villas](#), Santa Clara, Villa Clara, Cuba, 7/73

Master of Science (M.Sc.): Pedagogy in Higher Education. [Central University of Las Villas](#), Santa Clara, Villa Clara, Cuba, 10/99.

EXPERTISE AND CURRENT WORK INTERESTS

Teaching main interests: I have a lot of experience in teaching and methodology in the Chemistry Licentiate Career, in undergraduate and postgraduate education. My current teaching interests include quantum chemistry, spectroscopy, analytical chemistry, statistical thermodynamics, mathematical analysis as well as “rational” drug design. More recently, I am also interested in the teaching of analytical spectrometry (absorption and emission) and transdisciplinary course on astrochemistry and astrobiology in undergraduate education. I am the head of the staff of Physical Chemistry in the Chemistry Licentiate Career.

Research main interests: My current research interests are in the area of drug discovery, specifically the development of new computational methods for chem-bio-informatics investigations. In this sense, I've worked by means of mechanoquantic descriptors and more recently using topological descriptors. I've also worked in pedagogical topics related to curricular design, the use of future sceneries of education in order to obtain information for the curricular design and the inter and trans – disciplinary linking.

Some Recent Publication...

- ❖ Caracterización del actual diseño curricular de la Disciplina Química Física Plan C) de la Carrera de Lic. En Química .Monografía .UCLV 1999.
- ❖ Uso de laboratorios virtuales en la Carrera de Lic. En Química .Memorias de la 17 Conferencia de Química ISBN 959-207-083-o.2002.
- ❖ Aplicación de una estrategia didáctica para el uso de laboratorios virtuales en la Disciplina Química Física. Memorias de la II Conferencia Internacional de Química .UCLV.ISBN 959-250-080-o 2003
- ❖ Vinculo interdisciplinario en el proceso de enseñanza-aprendizaje mediante actividades combinadas en las disciplinas química física y química analítica. Revista Electronica del MES Pedagogia Universitaria VOL. IX , no. 4, 2004.
- ❖ Reflexiones sobre la educación química en América Latina mediante las técnicas de construcción de escenarios futuros. **Revista Cubana de Química**, Vol.16, No.3, C053 (ISSN 0258-5595). 2004
- ❖ Introducción de la asignatura optativa astroquímica en el currículo de la Licenciatura en Química. Consideraciones sobre su diseño curricular. **Revista Cubana de Química** Vol.16, No.3, C06. (ISSN 0258-5595). 2004.