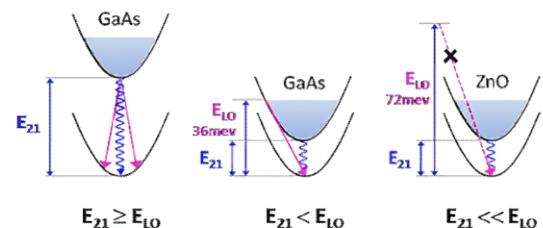
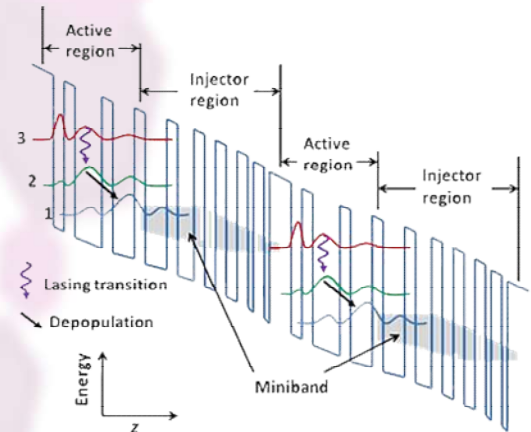


PHD THESIS

The goal of this PhD thesis is to contribute to the EU Project "Zinc Oxide for TeraHertz Cascade Devices (Zoterac)" through the analysis and development of mid and far infrared (THz) photodetectors using ZnO/ZnMgO quantum wells (QWs). To do so, the basic physical properties of the structures will be analyzed with various electrical and defect/trap spectroscopies.

The final goal will be to demonstrate quantum well infrared photodetectors (QWIPs) and quantum cascade lasers (QCLs), collaborating with the ZOTERAC partners: CNRS-Univ. Nice (France), Univ. Paris-Sud (France), ETH-Zurich (Switzerland) and Tech. Univ. Wien (Austria).

The thesis will be undertaken at ISOM-UPM (www.isom.upm.es), a leading institution in IR semiconductor optoelectronics.



Benefits:

4 year-long fellowship, course registration fees included, health insurance, full coverage of research stays at other institutions and attendance to international conferences.

Prerequisites:

- B.S. in Physics, Telecommunication, Electrical or Material Science Engineering (M.S. a plus).
- Grade point average >7.0
- Interest in optoelectronic semiconductor devices.
- High level of English (Spanish not necessary).

Applications:

Adrian Hierro, adrian.hierro@upm.es
Include Letter of Presentation, Curriculum Vitae, and BS/MS Diploma with Courses and Grades.