# Qing-Bin Lu’s Laboratory

<http://www.science.uwaterloo.ca/~qblu/>

## Location

Physics 136 & 137

## Management

Director:

* Qing-Bin Lu ([qblu@uwaterloo.ca](mailto:qblu@uwaterloo.ca); x33503)

Tour Operator:

* Dr. Lu or graduate students will usually give the lab tour when there are visitors

## Users

* Post-doctoral
* Graduate students (biophysics, biochemistry, nanotechnology)

## Research

* Environmental chemistry and physics (Science of Ozone Depletion and Global Climate Change)
* Femtobiology, Femtomedicine and Cancer Research

## Selected Projects

|  |  |  |  |
| --- | --- | --- | --- |
| Qing-Bin Lu (PI) | Canada Foundation of Innovation (CFI), and Ontario Innovation Trust (OIT).  Buildup of a femtosecond time-resolved laser spectroscopy laboratory for environmental and biological studies | $431,250 | 2004-2009 |
| Qing-Bin Lu (PI) | Natural Sciences and Engineering Research Council of Canada (NSERC), Building a nano-meter scale surface science analysis system for environmental studies | $149,986 | 2004-2009 |
| Qing-Bin Lu (PI) | Natural Sciences and Engineering Research Council of Canada (NSERC), Application of time-resolved femtosecond laser spectroscopic techniques to biological, environmental and medical studies, | $113,620 | 07/01/2006-06/30/2011 |
| Qing-Bin Lu (PI) | Canadian Institutes of Health Research (CIHR): Studies of Reaction Dynamics of Anticancer Drugs using Time-Resolved Ultrafast Laser Spectroscopy | $245,508 | 10/01/2006-09/30/2009 |
| Qing-Bin Lu (PI) | Ontario Ministry of Research and Innovation, Early Researcher Award: Application of Ultrafast Biophotonics Technology for Cancer Research | $150,000 | 2007-2012 |
| Qing-Bin Lu (PI) | Canadian Institutes of Health Research (CIHR) New Investigator Award: Studies of Reaction Dynamics of Anticancer Drugs using Time-Resolved Ultrafast Laser Spectroscopy | $300,000 | 2008-2013 |
| Qing-Bin Lu (PI) | Canadian Institutes of Health Research (CIHR): Molecular-Mechanism-Based Target Identification and Drug Discovery for Radiotherapy of Cancer | $662,865 | 2010-2015 |
| Qing-Bin Lu (PI) | Natural Sciences and Engineering Research Council of Canada (NSERC), Ultrafast electron transfer reactions in biological and environmental systems | $225,000 | 2011-2016 |

## Equipment

* Femtosecond lasers & an amplifier system
* Femtosecond Time-resolved transient absorption laser spectroscopy
* Femtosecond Time-resolved transient fluorescence laser spectroscopy
* An UHV surface science analysis system
* Cell culture facility
* Molecular biology and cell biology measurement facility

## Supporting Partners

* Ontario's Ministry of Research and Innovation (Early Researcher Award)
* Canadian Institute of Health Research (CIHR)
* NSERC
* CFI
* Ontario Innovation Trust (OIT)
* UW

## Access Rights

* Opened to university/faculty
  + Accessible for collaborators only
* Open to industry
  + Accessible for collaborators only
* Process:
  + Contact the lab director 2 months in advance about project
* Training
  + N/A