

Gary Fung, University of British Columbia, Vancouver, BC, Canada for his project *Gondwana Rifting: Insights from Amazonia's and West Africa's Diamonds*.

Gary Fung is a Ph.D. student at the University of British Columbia, under the supervision of Dr. Maya Kopylova. His doctoral research focuses on the origin of gem-quality, monocrystalline diamonds from different cratons (the Slave, Rio de la Plata, Amazonian and West African). He employs a multidisciplinary approach for investigation including diamond morphology, carbon and nitrogen isotopes, mineral and fluid inclusions (by electron microprobe, Raman spectroscopy and microthermometry) and nitrogen concentration and aggregation states (by Fourier Transform Infrared spectroscopy).



Diamonds, which commonly crystallize at depths greater than 160km, carry valuable information about the physiochemical conditions of the Earth's mantle. While it is widely accepted that diamonds form through metasomatic processes, the mechanisms and their formation environments remain poorly understood. Gary's research aims to 1) constrain the formation environment of large (>1 carat) diamonds from the Slave craton; 2) develop a genetic model for the Capiibary diamonds from the Rio de la Plata craton; 3) quantitatively characterize the diamond-forming fluid through fluid inclusion study; and 4) provide new geochemical evidence to Gondwana rifting based on lithospheric diamond samples.

His work is supported by the Lipman Student Research Grant, which funds the carbon and nitrogen isotope analyses. These analyses will be conducted on diamond samples from the Rio de la Plata (Paraguay), Amazonian (Brazil and Guyana), and West African (Sierra Leone and Ghana) cratons, and the results will subsequently be compared across the different populations.

Gary holds a bachelor's degree at the Chinese University of Hong Kong and a master's degree at McGill University, where he focused on the genesis of rare earth elements in iron-oxide-apatite deposits. He has held leadership roles in the Student Chapters of the Society of Economic Geologists and currently serves as the manager and host of the bimonthly seminar series for the Vancouver Kimberlite Cluster.