

Western Science Faculty Members Awarded NSERC Strategic Research Partnership Grant

Ding lab to develop a new low-cost, high-efficiency 'green' lighting product

Zhifeng Ding received an NSERC Strategic Research Partnership Grant for his research on efficient and low-cost light-emitting electrochemical (LEC) cells of graphene quantum dots (GQD). Canada currently spends \$35 billion for electricity. This project will contribute to the development of a low-cost and high-efficiency energy-sourcing prototype within the next three years. Its eventual introduction into the retail stream will create a new commercial space for 'green' lighting products, reduce energy consumption and reduce stress on the process of warming in the global environment.

Neff lab to identify challenges and solutions to reintroduction of Atlantic Salmon into the Great Lakes

Bryan Neff received an NSERC Strategic Research Partnership Grant for his research on the challenges involved in the reintroduction of Atlantic salmon into Lake Ontario. Atlantic salmon were once abundant in Lake Ontario and supported one of its most valuable fisheries, but these fish were extirpated from the lake a century ago. The successful reintroduction of Atlantic salmon into Lake Ontario has become a top priority for management agencies and conservation groups, as it has been estimated that it could provide up to \$15 million in new revenue over 10 years to local economies through fisheries, and would be a substantial step towards the recovery of lost biodiversity. A self-sustaining population of Atlantic salmon would also provide ecosystem services through their role as a top predator, increasing the resiliency of food webs and fisheries. One of the primary hurdles to their rehabilitation into Lake Ontario is high in-stream mortality. The Neff lab will use an integrated approach to detail the causes of in-stream mortality and provide best approaches for mitigation. Project outcomes will contribute to the development of best practices for hatchery rearing, release timing, and strain and site selection to support the restoration of Atlantic salmon in Lake Ontario and throughout Canada.