

# Table of Contents

Volume 29, Issue 9 — September 2022

---

## Research Articles

---

1.

### **Impact of Climate Change on the Phenology of Alpine Plant Species**

Naomi Tanaka, Carlos Mendes, Amina El-Amrani, Lian Wang, Viktor Rossi, Ingrid Ouedraogo, Anna Zhou

*Keywords: climate change; phenology; alpine plants; biodiversity; ecosystem dynamics*

---

2.

### **Impact of Urbanization on Pollinator Diversity in Metropolitan Ecosystems**

Anika Patel, Carlos Mendes, Mei-Ling Chen, Yusuf Al-Hassan, Emma Mensah, Hans Zhou, Lei López

*Keywords: urbanization; pollinator diversity; metropolitan ecosystems; biodiversity conservation; urban planning; floral resources*

---

3.

### **Mathematical Modelling and Analysis of Temperature Effects in NEMS based Bi-Metallic Cantilever for Molecular Bio-sensing Applications**

Hans Meyer, Taro Nakamura, Nana Bondarenko, Andriy Laurent, Taro Nakamura, Nana Bondarenko, Andriy Laurent

*Keywords: NEMS; biosensors; bi-metallic cantilevers; temperature effects; mathematical modeling; Lab-on-Chip; finite element analysis*

---

4.

### **Study of Pathogenicity Factors and In Vitro Amplification of Acute Pulmonary Infections Associated *lasR* Gene in *Pseudomonas aeruginosa***

, Louis Schulz