In order to confront the complicated problems that contemporary society faces, the integration of science and technology in harmony with a broad range of fields has become increasingly important. The disciplines by which our community have contributed in this endeavor and it is certain that they are branches of each science will produce further breakthroughs through chemical and biology and a shared perspective of "molecular transformation" and "functional organization of interactions."

To promote these developments, a new department was established in 2007 that fused chemistry and chemical biology, which has grown into the Division of Molecular Science. We are home to more than 30 research groups in major research areas of Molecular Science, Material Science, and Chemical Biology. Each research group pursues its own research mission as well as collaborating on joint research projects with other groups.

New functional bio-based plastics and clarifying the biodegradation mechanism of plastics

Ken-ichi Kasuya leads the Green Polymer research group at Gunma University. Research in his group focuses on the chemistry of functional oligonucleotides such as antisense DNA, nanoscale biolabellabeled oligonucleotide probes, and the artificial nucleic acid system. Recently his group has succeeded in synthesizing a fully bio-based plastic from a plant. In collaboration with other researchers, he has been addressing the development of novel biodegradable plastics in order to solve profound problems caused by microplastics in the ocean.

**Professor Ken-ichi Kasuya**

Ken-ichi Kasuya

**Professor Ichiro Matsuo**

Ichiro Matsuo