

## **Towards advanced micro magneto-mechanical components**

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**ABSTRACT:** Magneto-mechanical components are meant to provide unprecedented capabilities for a wide range of applications operating in the micro-scale. These components include micro-motors and actuators, micro-magnetic gears and micro-magnetic bearings and couplings. Their potential benefits include high-power density, high efficiency and minimization of the tribological contact issues.

In this contribution, we discuss micro-magnet specifications for optimization of the performance of micro-magneto mechanical components. We review the current performance, development status and future perspective of magneto-mechanical components in the frame of the H2020 UWIPOM2 European Research Project. UWIPOM2 project aims to the demonstration of micro-robotic complex magnetic actuators for minimally invasive micro-surgery techniques and in-vivo health treatments.

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