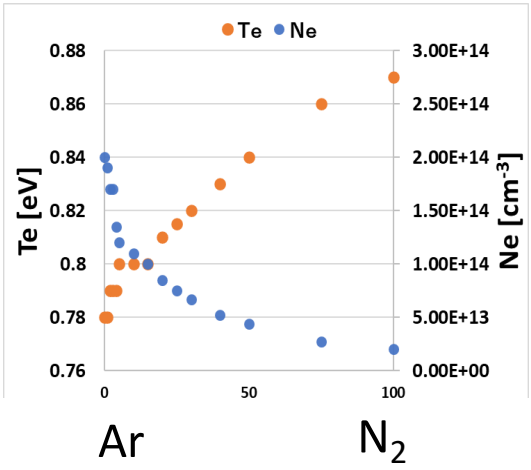
Applications 2 — Measurement of non-equilibrium atmospheric-pressure touchable plasma

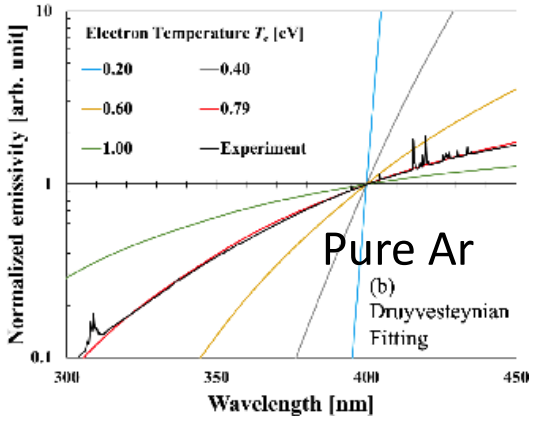
Medical and dental applications

- Realization of low-temperature atmospheric-pressure plasma that does not cause burns.
- Basic research aimed at dermatology, trauma treatment, hemostasis, etc. has begun
- **But, electron temperature could not be measured easily.**

Need for a simple measurement method

- Considering the continuous spectrum ↘,
- We can determine T_e and N_e!





H.Onishi, F. Yamazaki, Y. Hakozaki, M. Takemura, A. Nezu, and H. Akatsuka, "Measurement of electron temperature and density of atmospheric-pressure non-equilibrium argon plasma examined with optical emission spectroscopy", Jpn. J. Appl. Phys. 60, 026002 (2021).

Our paper won the "20th Plasma Electronics Award 2021" and "44th JSAP Outstanding Paper Award 2022".