1 Personal and contact information

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2 Education and professional experience

2.1 Education

- 2017.03 Ph.D. in Agricultural Engineering, The University of Tokyo
- 2014.03 M.S. in Agricultural Engineering, The University of Tokyo
- 2012.03 B.S. in Agricultural Engineering, The University of Tokyo

2.2 Professional experience

- 2017.04–2020.03
  - JSPS Postdoctoral Research Fellow, Graduate School of Sciences and Technology for Innovation, Yamaguchi University, Japan
- 2014.04–2017.03
  - JSPS Research Fellow, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan

3 Funding information

- Project: Development of a state-space model of leaf photosynthetic characteristics for prediction and regulation of whole-plant photosynthesis
  - Funding Agency: Japan Society for the Promotion of Science
  - Grant: Grant-in-Aid for JSPS Fellows (PD)
  - Project period: 2017.04–2020.03
  - Role: Principal investigator
  - Budget amount: 4,550,000 JPY
- Project: Estimation of photosynthetic electron transport rate from light spectrum based on photochemical reactions at photosystems
  - Funding Agency: Japan Society for the Promotion of Science
  - Grant: Grant-in-Aid for JSPS Fellows (DC1)

- Project period: 2014.04–2017.03
- Role: Principal investigator
- Budget amount: 3,200,000 JPY

4 Bibliography (2013–)

4.1 Original articles (peer-reviewed)

- 7. Murakami K.* & Ibaraki Y. (in press) “Time course of the photochemical reflectance index (PRI) during photosynthetic induction: its relationship with the photochemical yield of photosystem II”. *Physiologia Plantarum*. in press. LINK.
- 6. Murakami K.*, Matsuda R.* & Fujiwara K. (in press) “A mathematical model of photosynthetic electron transport in response to light spectrum based on excitation energy distributed to photosystems”. *Plant and Cell Physiology*. in press. LINK.
- 5. Murakami K.*, Matsuda R.* & Fujiwara K. (2018) “Quantification of excitation energy distribution between photosystems based on a mechanistic model of photosynthetic electron transport”. *Plant, Cell & Environment*. **41**, 148–159. LINK.
- 4. Murakami K.*, Matsuda R. & Fujiwara K. (2016) “Interaction between the spectral photon flux density distributions of light during growth and for measurements in net photosynthetic rates of cucumber leaves”. *Physiologia Plantarum* **158**, 213–224. LINK.
- 3. Matsuda R.*, Yamano T., Murakami K. & Fujiwara K. (2016) “Effects of spectral distribution and photosynthetic photon flux density for overnight LED light irradiation on tomato seedling growth and leaf injury”. *Scientia Horticulturae* **198**, 363–369. LINK.
- 2. Murakami K., Matsuda R.* & Fujiwara K. (2014) “Light-induced systemic regulation of photosynthesis in primary and trifoliate leaves of *phaseolus vulgaris*: Effects of photosynthetic photon flux density (PPFD) *versus* spectrum”. Plant Biology **16**, 16–21. LINK.
- 1. Murakami K., Matsuda R.* & Fujiwara K. (2013) “Effects of supplemental lighting to a lower leaf using light-emitting diodes with different spectra on the leaf photosynthetic rate in sweet pepper”. *Journal of Agricultural Meteorology* **69**, 55–63. LINK.

4.2 Other articles (peer-reviewed)

- 1. Murakami K.*, Matsuda R. & Fujiwara K. (2017) “A basis for selecting light spectral distribution for evaluating leaf photosynthetic rates of plants grown under different light spectral distributions”. *Environmental Control in Biology* **55**, 1–6. LINK.

4.3 Book Chapters

- 2. Murakami K.* & Matsuda R. (2016) “Optical and physiological properties of a leaf”. *In* LED lighting for urban agriculture (*eds* T. Kozai, K. Fujiwara, & E. S. Runkle), pp. 113–123. Springer Singapore. LINK.
- 1. Matsuda R*. & Murakami K. (2016) “Light- and CO_2-dependent systemic regulation of photosynthesis”. *In* Progress in botany (*eds* U. Lüttge, M. F. Cánovas, & R. Matyssek), Vol. 77, pp. 151–166. Springer International Publishing, Switzerland. (Peer-reviewed; LINK).