

# Special Issue

## Status of The Eupraxia Design Study – Towards The Next Generation of Particle Accelerators

### Message from the Guest Editors

The EuPRAXIA consortium is preparing a conceptual design report of a highly compact and cost-effective European facility with multi-GeV electron beams using plasma as the acceleration medium. The accelerator facility will be based on a laser and/or a beam driven plasma acceleration approach and will be used for photon science, high-energy physics detector tests, and other applications, such as compact X-ray sources. The aim of this Special Issue is to provide an overview of the current state of the design of the different elements of the EuPRAXIA facility, including simulations of different acceleration schemes, plasma structures, high-power lasers, and the development of possible applications like free-electron lasers and positron sources.

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### Guest Editors

Dr. Ralph Aßmann

Prof. Dr. Carsten P. Welsch

Dr. Ricardo Torres

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### Deadline for manuscript submissions

closed (31 March 2020)



## Instruments

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The realization of dedicated instrumentation has always been a collateral aspect of experimental research. In addition, many groups dedicate efforts and resources solely to the development of new devices, sensors, equipment and large infrastructure, theoretical and numerical studies, and novel experimental methodologies. With *Instruments* we wish to address both established and emerging communities, also to favor the creation of innovative trans-disciplinary approaches. We see *Instruments* as an exciting high-impact journal that will soon hold a leading position in disseminating cutting edge scientific and technological research.

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### Editor-in-Chief

Prof. Dr. Antonio Ereditato

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