

WORKSHOP INFO

The workshop will start around 9:00 am and end around 5:00 pm at IPEN. Talks and presentations will be given in different sessions.

REGISTRATION

The preliminary program, sponsoring information, registration and all updates will be published online:

www.fep.fraunhofer.de/accel

Lunch and coffee breaks will be offered.

The workshop can be joined on only one of both days as well as for the whole two days. The participation fee per day is 40 R\$ (11 US\$) for only one day and 65 R\$ (18 US\$) for both days including coffee breaks and a get together event.

Workshop languages are English and Portuguese with simultaneous translation.

For all questions regarding the workshop, registration or program please contact us: accel@fep.fraunhofer.de

VENUE

Instituto de Pesquisas Energéticas e Nucleares (IPEN/CNEN-SP)
Avenida Lineu Prestes, 2242 - Cidade Universitária
CEP 05508-000 São Paulo, Brazil
www.ipen.br

CONTACT

Workshop Management, Industrial Exhibition, Sponsoring

IPEN - Instituto de Pesquisas Energéticas e Nucleares
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Local Organization and Miscellaneous Questions

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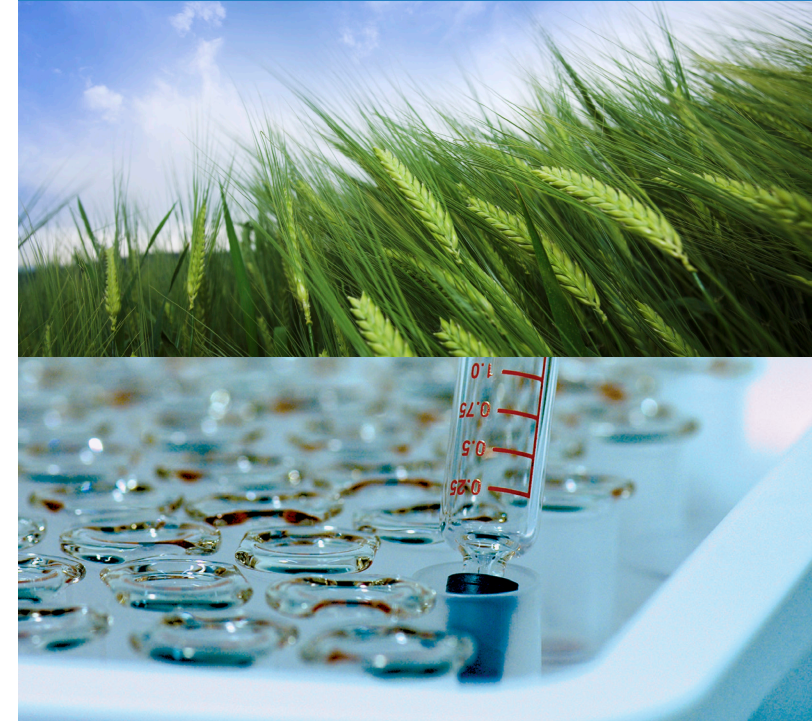
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Workshop website: www.fep.fraunhofer.de/accel

WORKSHOP

ACCELERATED ELECTRONS FOR LIFE (AcEL)

NOVEMBER 6-7, 2017 | SÃO PAULO, BRAZIL





WELCOME

Accelerated electrons are an universal tool for many industrial applications, well established for high-efficient production processes. The chemical-biological effects of accelerated electrons are used to cure or crosslink polymeric materials, change their surface properties and sterilize materials. Especially in **agricultural** and **food sector** as well as in **biomedical branches** and **life sciences**, the effect of low-energy electron beam processes is becoming more and more important thanks to their number of advantages such as process control, reproducibility and process speed among others.

The **Fraunhofer FEP** offers research and development for industrial and public funded partners in the fields of vacuum coating, surface treatment as well as organic semiconductors. The Fraunhofer FEP has used low-energy electron beams for many years as a versatile tool e.g. to induce controlled chemical and biological effects on material surfaces. One already established process for an environmentally friendly and sustainable agriculture is the seed treatment using low-energy accelerated electrons. Low-energy electrons as an environmentally friendly and gentle technology also allow to effectively disinfect or sterilize surfaces of medical products (implants, instruments), packaging, foods and animals feeds or even sensitive materials and products within a short time. Just recently we achieved promising results with the inactivation of pathogens for vaccine production in a fast and more effective way. Together Fraunhofer institutes FEP, IZI, IPA and IGB successfully inactivated viruses like H3N8, Polio or Zika among others.

The **Nuclear and Energy Research Institute (IPEN)** is a Brazilian institution, supported and administrated technically and financially by the **National Nuclear Energy Commission (CNEN)**. It is recognized as a national leader institution in R&D areas of radiopharmacy, application of ionizing radiation, nuclear science and technology, nuclear reactors and fuel cycle, environmental science and technology, renewable energies, materials and nanotechnology, biotechnology, laser technology and education.

Together with the **German House for Research and Innovations** we are inviting partners and interested people from related branches, research institutions and policy makers to participate in our joint workshop "AcEL – Accelerated electrons for life". It will give you a detailed insight in current research and technology results and focused applications as well as procedures using **low-energy electron beam** and **high-energy radiation**. Different sessions focus on their use e.g. for **water treatment**, inactivation of **vaccines** or **seed disinfection**. Furthermore main applications and technologies for **hygiene and sterilization** in packaging- and **food industry** and for food-disinfection and plant protection will be presented.

Next to the presentations we invite you to join the workshop also to get into contact and discussion with experts and other participants to discuss current challenges and requirements as well as existing solutions on these topics.

PRELIMINARY PROGRAM

Introductions to IPEN, Fraunhofer FEP and German House for Research and Innovation Sao Paulo

Technologies for environmental solutions and for life sciences, healthcare, medicine

- Treatment of effluents
 - carried out by SABESP
 - by IPEN – electron accelerator
 - by Fraunhofer FEP – electron beam technology
 - by Escola Politécnica USP – advanced oxidative processes
- Vaccine production – Instituto Butantã
- New procedures for producing safe and more effective vaccines – Fraunhofer FEP
- SteriHealth® compact sterilizer – Fraunhofer FEP
- Dengue / Zika Virus

Technologies for agriculture and food sector

- Legislation – Ministry of Livestock Agriculture, Livestock and Fodder
- Conservation of grains and food – Embrapa
- Treatment of seeds and grain by electron beam technology – Fraunhofer FEP
- Conservation of food using electron beam – IPEN
- Sterilization and hygiene of packaging – Fraunhofer FEP
- Sterilization of food packaging – IPEN