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IISMA developments towards modern highly granular calorimeters

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Institute of Scintillation Materials, Kharkiv, Ukraine has been a member of CMS collaborators for more than 20 years, is also a technically associated member of the LHCb experiment, takes part as a partner in other projects and communities in high energy physics experiments
The Institute is a manufacturer and supplier of scintillators for different experiments. Active take part in the development of materials for detectors for industrial and high energy physics experiments.
Most of the research work of the institute is devoted to the development of radiation-resistant materials based on organic and inorganic scintillation materials. Optical materials for the detector: reflector, optical contact, absorber.
Work is underway to develop and create technologies for obtaining scintillators for modern highly granular calorimeters.
We take part in R&D project aims to study the concept of a next-generation calorimeter, in analogy with the Shashlik technology, for possible application in FCC e+e- experiments. Potential it provide extremely fine sampling of the electromagnetic shower and for this reason a very good photon energy resolution is expected (~2%/√E) with respect to conventional Shashlik detectors.

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