

## **New Organic Materials applied to Plastic Scintillators for Fast Timing Detectors**

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Organic Scintillators are materials made up of organic molecules (primary dopant) and eventually by wave shifters (secondary dopant) dissolved in a polymeric matrix such as polystyrene (PS) or polyvinyltoluene (PVT), used in a wide range of detectors due to their capability to obtain very good time resolutions, low cost and flexibility in manufacturing. New organic molecules have been synthesized by Laboratory of Electrochemistry and Organic Synthesis (LEOS) in order to develop a new class of plastic scintillators for fast timing detectors, in collaboration with physics, engineering of University “Sapienza” of Rome and Centro Studi e Ricerche Enrico Fermi (TOPS project, *Time Of flight Plastic Scintillators*).