A new graphene-based RPC fully built with additive manufacturing

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A fully automated 3D printing of a detector would reduce drastically:

- *Detector construction cost and assembly time*
- *The probability of mistakes during construction*

Introduced and optimized a new electrode material (graphene-doped PLA) to match the properties of the existing Bakelite featured in RPC detectors. The new material is extruded in a filament form, readily usable by any general-purpose desktop 3D printers

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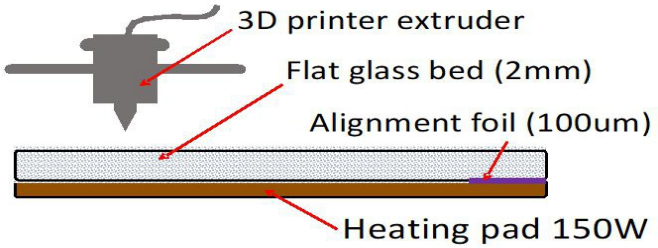

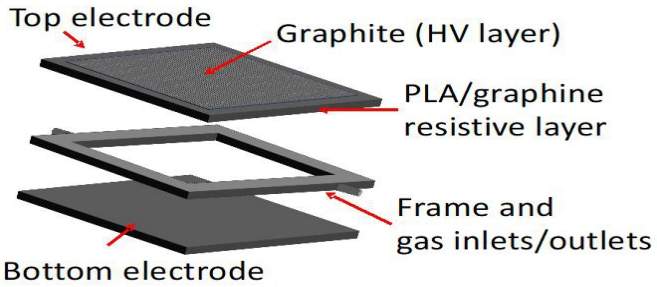

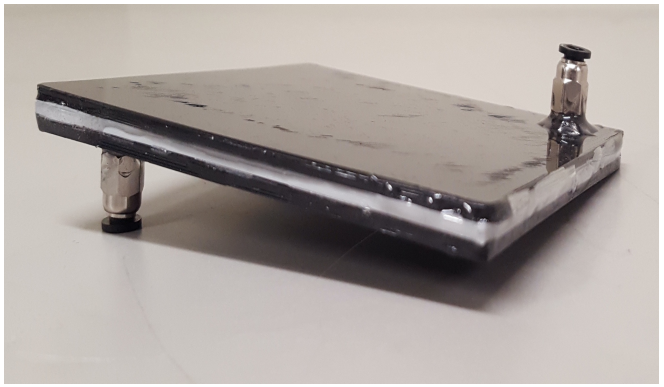

- Additive manufacturing dramatically reduces **prototyping costs** and the need for an industrial partner
- In-house design and fabrication allows **complete control** of the **costs, timeline** and **design** optimization
- Prototyping and testing is a formative learning **educational tool** that shapes young students