

Patent title:	Radiation detection element, radiation detector and radiation detection apparatus
FBK center:	CMM
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Application(s):	Radiation detection
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Abstract:	A radiation detection element comprises: a semiconductor part generating an electric charge by entrance of radiation; a signal output electrode provided at the semiconductor part and outputting a signal caused by the electric charge; a potential gradient generation electrode provided at the semiconductor part, for applying voltage such that a potential gradient in which a potential varies toward the signal output electrode is generated inside the semiconductor part; a collection electrode provided at the semiconductor part, for collecting electric charges not derived from radiation; an insulating film provided on a side of the semiconductor part where the signal output electrode is located; and a conductive layer provided between the insulating film and a part of the semiconductor part, and having electric resistance lower than the electric resistance of the semiconductor part and higher than the electric resistance of the collection electrode. The conductive layer is located at a position where a distance from the signal output electrode is equal to or longer than a distance between the collection electrode and the signal output electrode.