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ELECTROPHOTOGRAPHIC SPEED OF INORGANIC PHOTOCONDUCTORS IS INCREASED BY THE ADDITION OF ORGANIC PHOTOCONDUCTORS

**Paul B. Gilman, Jr., 1669 Lake Ave.,
Rochester, N.Y. 14615**

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The electrophotographic speed of inorganic photoconductor and xeroradiographic compositions, such as those containing TiO_2 and PbO , can be improved by including an organic photoconductor in the electrophotographic element. The organic and inorganic photoconductors can be in separate layers or in the same layer of the element. For example, a solution of 398 g. of toluene, 52.7 g. of polyvinyl butyral binder resin, 17.5 TiO_2 is coated on a clay-coated conductive paper. Over the resulting layer of TiO_2 -binder resin is coated at a wet thickness of 0.006 inch a solution of 200 g. methylene chloride, 18 g. polycarbonate binder resin and 12 g. of the organic photoconductor 4,4' - diethylamino-2,2'-dimethyltriphenylmethane. The double coated element has greater sensitivity than either the TiO_2 layer or the organic photoconductor alone. The increase in speed is greater than the cumulative speed of the separate components. Similar improvement occurs when the organic photoconductor (1.0 g. in 0.5 ml. methylene chloride) is added to 25 ml. of a TiO_2 dispersion in polyvinyl butyral resin and coated at 0.004 inch wet thickness on conducting paper.