

# Photo-induced Discharge Characteristics by Intensity Modulated Laser Scanning Exposure

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## **Abstract**

A digital electrophotographic process based on intensity modulated laser scanning exposure can realize high resolution as well as continuous tone reproduction. Photo-induced discharge characteristics (PIDC) of an organic photoconductor by the intensity modulated laser exposure has been compared with that by an analog exposure. Those PIDCs measured at the development position have been similar in sensitivity at the lower gradations and different in saturating potential at the high intensity exposure. the similarity in sensitivity is ascribed to Langevin recombination effect in the CGL and the difference in saturating potential is ascribed to space charge remained in the CTL. When development electric field is applied, the

remained space charge is removed. That accounts for the reason of the differences of development characteristics between analog and digital process. Numerical analysis also supports the experimental results.

## **Biography**

The author graduated from Nagoya university, dept. of physics and joined in Minolta Co., Ltd. in 1984. He has researched and designed digital electrophotographic printing process, development system and tone reproduction system in 15 years. He is now a staff manager in development division 3 of Imaging information products development headquarters. he is a member of the Imaging Society of Japan.