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## Table of contents

Luminescence:

Producing optical radiation with excitation of atoms and molecules through transitions into ground state (emission of photons):

- Electroluminescence: electrical excitation with diodes or gas discharge
- Photoluminescence: excitation with electromagnetic radiation (photons), phosphor or fluor
- Chemoluminescence: excitation with chemical reaction, e.g. luminol
- Bioluminescence: excitation with chemical reaction at living organs, e.g. oxidation of luciferin
- Triboluminescence: excitation with friction or tearing apart (e.g. sugar crystals)
- Radioluminescence: excitation with irradiation with  $\alpha$ -,  $\beta$ - or  $\gamma$ -radiation