photochemical reaction

Synonym: photoreaction

Generally used to describe a chemical reaction caused by absorption of ultraviolet, visible or infrared radiation. There are many ground-state reactions, which have photochemical counterparts. Among these are photochemical nitrogen extrusions, photocycloadditions, photodecarbonylations, photodecarboxylations, photoenolizations, photo-Fries rearrangement, photoisomerizations, photooxidations, photorearrangements, photoreductions, photosubstitutions, etc.

Note:
Photochemical paths offer the advantage over thermal methods of forming thermodynamically disfavoured products, overcome large activation barriers in a short period of time, and allow reactivity otherwise inaccessible by thermal methods.

Source:
PAC, 2007, 79, 293 (Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006)) on page 386