

1. Record Nr.	UNINA9910971299603321
Titolo	Asphalt surfaces as ecological traps for water-seeking polarotactic insects : how can the polarized light pollution of asphalt surfaces be reduced? / / Gabor Horvath ... [et al.]
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2010
ISBN	1-61209-106-7
Edizione	[1st ed.]
Descrizione fisica	1 online resource (59 pages)
Collana	Environmental remediation technologies, regulations and safety
Altri autori (Persone)	HorvathGabor <1963->
Disciplina	639.9/7573
Soggetti	Pavements, Asphalt - Environmental aspects Roads - Design and construction Light pollution Phototropism in animals Insects - Effect of light on Polarization (Light)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction : polarotactic insects attracted to asphalt roads and polarized light pollution of asphalt surfaces -- Method : measuring the polarization patterns of asphalt surfaces by imaging polarimetry -- Results -- Discussion -- Conclusions.
Sommario/riassunto	The surface of dry or wet asphalt roads reflect partially linearly polarized light, the degree of linear polarization p of which depends on the darkness and roughness of asphalt: the darker and/or the smoother the asphalt, the higher the p of light reflected from it. If the asphalt is sunlit and the direction of view is parallel to the solar-antisolar meridian, then the direction of polarization of asphalt-reflected light is horizontal. In this case the asphalt surface can attract water-seeking aquatic insects, because they detect water by means of the horizontal polarization of light reflected from the water surface. This phenomenon is called positive polarotaxis. This new book proposes the use of these remedies on asphalt roads running near emergence sites of endangered aquatic insects, especially in the vicinity of wetlands, rivers and lakes.

