

1. Record Nr.	UNINA9910896531603321
Autore	Horváth Gábor
Titolo	Polarization Vision and Environmental Polarized Light // edited by Gábor Horváth
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	3-031-62863-2
Edizione	[3rd ed. 2024.]
Descrizione fisica	1 online resource (842 pages)
Collana	Springer Series in Vision Research, , 2625-2643
Disciplina	535.52
Soggetti	Physiology Psychobiology Human behavior Neurosciences Ophthalmology Animal Physiology Behavioral Neuroscience Neuroscience
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Polarization Sensitivity and Vision -- Polarization Sensitivity in the Vinegar Fly, <i>Drosophila melanogaster</i> -- Polarization Sensitivity in Bees (Apoidea) -- Polarization Vision and Orientation in Ball-rolling Dung Beetles -- Polarization Sensitivity in Desert Locusts, <i>Schistocerca gregaria</i> -- Polarization Sensitivity in Butterflies -- Polarization Sensitivity in Tabanid Flies -- Horsefly Polarotaxis -- Circular Polarization Insensitivity in Scarab Beetles with Circularly Polarizing Exocuticle -- Polarization Sensitivity and Polarotaxis in Springtails (Collembola) -- Polarization Sensitivity, Polarotaxis and Polarization-elicited Optomotor Response in Yellow Fever Mosquitoes ( <i>Aedes aegypti</i> ) -- Polarotaxis in Mayflies -- Polarization Sensitivity and Polarotaxis in Odonates (Dragonflies and Damselflies) -- Polarization Vision of Crustaceans -- Polarization Sensitivity in Cephalopods - Cuttlefish as Model Animals -- Polarization Sensitivity in Fishes -- Polarization Sensitivity in Amphibians: An Update -- Polarization Sensitivity in Reptiles: An Update -- Polarization Vision in Birds --

Polarization Sensitivity and Insensitivity in Bats -- Polarization Insensitivity in Harbour Seals (*Phoca vitulina*) -- Human Polarization Sensitivity: An Update -- Vision of Trilobites and Polarized Light -- Part II: Environmental Polarization with Implications to Polarization Sensitivity and Vision -- Polarization Signals in Crustaceans and Insects -- Reflection-polarization Characteristics of Water Surfaces -- Polarized Light Pollution and Ecological/Evolutionary Traps Induced by It for Polarotactic Aquatic Insects -- Part III: Celestial Viking Navigation -- Sky-polarimetric Viking Navigation: An Extended Update -- Part IV: Astronomical Polarization -- Polarization of Sunlit and Moonlit Skies, Eclipse Skies, Solar Coronas and Kordylewski Dust Clouds -- Astronomical Polarization, Polarization-sensitive Cameras and Telescopes.

---

Sommario/riassunto

This new edition presents a state-of-the-art exploration of polarized light and polarization vision. Part I of the book examines polarization sensitivity across many animal taxa, including invertebrates and vertebrates, and it details both terrestrial and aquatic life. Part II is devoted to the description of environmental polarization with implications to animal and human polarization vision. This includes underwater polarization, polarization signals, sky-polarimetric Viking navigation and astronomical polarization. This part also examines polarized light pollution induced by anthropogenic factors, such as reflection off asphalt surfaces, glass panes, car bodies, and other man-made structures that are now known to form ecological traps for polarotactic insects. The new edition features a number of novelties, including chapters on trilobites, springtails, bats, seals, imaging polarimetry, and astronomical polarization.

---