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Daniel S. Joyce, Kevin W. Houser, Stuart N. Peirson,
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Cambridge Elements

Elements in Perception
edited by
James T. Enns
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MELANOPSIN VISION

Sensation and Perception Through Intrinsically Photosensitive Retinal Ganglion Cells

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www.cambridge.org
Information on this title: www.cambridge.org/9781009014878

DOI: 10.1017/9781009029865

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J. Zele 2022

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First published 2022

A catalogue record for this publication is available from the British Library.

ISBN 978-1-009-01487-8 Paperback
ISSN 2515-0502 (online)
ISSN 2515-0499 (print)

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Abstract: Intrinsically photosensitive retinal ganglion cells (ipRGCs) are the most recently discovered photoreceptor class in the human retina. This Element integrates new knowledge and perspectives from visual neuroscience, psychology, sleep science and architecture to discuss how melanopsin-mediated ipRGC functions can be measured and their circuits manipulated. It reveals contemporary and emerging lighting technologies as powerful tools to set mind, brain and behaviour.

Keywords: intrinsically photosensitive retinal ganglion cell, vision, sleep, circadian rhythms, melanopsin

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ISBNs: 9781009014878 (PB), 9781009029865 (OC)
ISSNs: 2515-0502 (online), 2515-0499 (print)

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