



# Library Indian Institute of Science Education and Research Mohali



**DSpace@IISERMohali (/jspui/)**  
**/ Publications of IISER Mohali (/jspui/handle/123456789/4)**  
**/ Research Articles (/jspui/handle/123456789/9)**

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/5128>

Title:	Laser-Dressed Molecular Point Groups in the Kramers–Henneberger Oscillating Frame-of-Reference: Selection Rules for Higher Harmonic Generation
Authors:	Paul, Mishu (/jspui/browse?type=author&value=Paul%2C+Mishu) Pananghat, Balanarayan (/jspui/browse?type=author&value=Pananghat%2C+Balanarayan)
Keywords:	Laser-Dressed Molecular Kramers–Henneberger Oscillating Higher Harmonic Generation
Issue Date:	2022
Publisher:	ACS Publications
Citation:	Journal of Physical Chemistry Letters, 13(27), 6268–6275.
Abstract:	Point groups of molecules in a laser, within the Kramers–Henneberger (KH) oscillating frame for laser-dressed states, is given in this work. In a Fourier series of the time-dependent potential, the zeroth-order time-average yields the point group of the laser-dressed molecule. Various laser polarizations and relative molecular orientation induce a new point group or retain the original point group. The dynamical Fourier components (KH potentials) classify as irreducibles of this new laser-dressed point group. Recurrence of unique irreducibles in the Fourier expansion dictates the dynamical symmetry of the Floquet Hamiltonian. Hence, selection rules for harmonic generation spectra are $Nk \pm 1$ in harmonic order, where $N$ is the number of unique irreducibles and $k \in \mathbb{N}$ .
Description:	Only IISER Mohali authors are available in the record.
URI:	<a href="https://doi.org/10.1021/acs.jpcllett.2c01144">https://doi.org/10.1021/acs.jpcllett.2c01144</a> ( <a href="https://doi.org/10.1021/acs.jpcllett.2c01144">https://doi.org/10.1021/acs.jpcllett.2c01144</a> ) <a href="http://hdl.handle.net/123456789/5128">http://hdl.handle.net/123456789/5128</a> ( <a href="http://hdl.handle.net/123456789/5128">http://hdl.handle.net/123456789/5128</a> )
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format
Need To Add...Full Text_PDF. (/jspui/bitstream/123456789/5128/1/Need%20To%20Add%e2%80%a6Full%20Text_PDF.)		15.36 kB	Unknown

[View/Open \(/jspui/\)](#)

[Show full item record \(/jspui/handle/123456789/5128?mode=full\)](#)

[📊 \(/jspui/handle/123456789/5128/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.

