

Review of articles for FY3M class
J. Erhart

Scopus – **diffraction**

Krulj I., Nešić L.
Convenient reflective diffraction gratings in physics teaching
(2019) Physics Education, 54 (2), art. no. 025015

Hughes S., Gurung S.
A simple method of demonstrating Huygens' principle in the classroom
(2021) Physics Education, 56 (3), art. no. 035005

Pfaender J., Gratton L.M., Rosi T., Malgieri M., Onorato P.
Spectral study of Na source with a smartphone and a diffraction grating
(2020) Physics Education, 55 (3), art. no. 033005

Ribeiro J.L.P.
Symmetry breaking: A compact disc reflected in a mirror
(2016) Physics Education, 51 (6), art. no. 063006

Singh M.
A simple experiment to study the array theorem using Fraunhofer diffraction of a two-dimensional grating
(2023) Physics Education, 58 (4), art. no. 045007

Williamson J., Vokes M., McDaid C., Mears M.
Razors and lasers: An undergraduate experiment to determine thermal expansion coefficients using single slit diffraction measurements
(2022) Physics Education, 57 (1), art. no. 015002

Onorato P., Gratton L.M., Di Mauro M., Rosi T.
A simple experimental setup for investigating light diffraction with a thin copper wire and a LED
(2022) Physics Education, 57 (6), art. no. 063003

Deb D., Chakrabarty S., Roy Choudhury S.
Measuring wavelength of laser beam using single slit diffraction: a simple but precise experiment using webcam and ImageJ software
(2024) Physics Education, 59 (1), art. no. 015002

Hachmi A., El Hadi M., Essaadaoui R., Mommadi O., Ouariach A., El Moussaouy A.
Development of an educational device, based on Arduino, to facilitate the understanding of light diffraction
(2022) Physics Education, 57 (4), art. no. 045032

Fang Q.-T., Li Z.-Y., Yu Q.-P., Zou C.-Y., Li S.-Q., Luo D.-B.
Visualization of ultrasonic wave fields and demonstration of sound wave property in undergraduate physics experiment
(2021) Physics Education, 56 (6), art. no. 065016

Hughes S., Wegener M., Gurung S.

Shrinking violet

(2022) Physics Education, 57 (5), art. no. 055016

Phanthong T.

Repurposing electronic waste: unveiling hidden gratings in discarded projectors for innovative x-ray diffraction simulations

(2025) Physics Education, 60 (3), art. no. 035007

Westhoff P.M., Pusch A.

A low cost ripple tank experiment with 3D printed components and an Arduino control unit

(2023) Physics Education, 58 (6), art. no. acf7a2

Rodrigues M., Simeão Carvalho P.

Teaching optical phenomena with Tracker

(2014) Physics Education, 49 (6), pp. 671 - 677

Aji M.P., Karunawan J., Chasanah W.R., Nursuhud P.I., Wiguna P.A., Sulhadi S.

A simple diffraction experiment using banana stem as a natural grating

(2017) Physics Education, 52 (2), art. no. 025009

Hughes S., Evason C., Nadarajah H., Leisemann S.

Using a scanning electron microscope in physics STEM education

(2019) Physics Education, 54 (5), art. no. 055018

Bhat V., Bhatt U.R.

Microsoft Excel powered virtual electron diffraction tube experiment as an enhanced educational tool

(2023) Physics Education, 58 (5), art. no. 055015

Aji M.P., Prabawani A., Rahmawati I., Rahmawati J.A., Priyanto A., Darsono T.

A diffraction grating from a plastic bag

(2019) Physics Education, 54 (3), art. no. 035016

Mart T.

How do I introduce Schrödinger equation during the quantum mechanics course?

(2021) Physics Education, 56 (2), art. no. 025012

Chebrolu R., Tulsani S.R., Voma U.K.

Rayleigh's criterion of resolution: experimental demonstration and MATLAB simulation

(2025) Physics Education, 60 (1), art. no. 013004

Turner H.C., Whitt D.P., Kelly T.J.

Optical coronae and iridescence: Some simple hands-on activities

(2020) Physics Education, 55 (6), art. no. 064001

Magalhães T.E.C., Ribeiro T.M.

Low-cost optical home-lab experiments

(2024) Physics Education, 59 (2), art. no. 025019

Torcal-Milla F.J.

A diffraction experiment at the near field: The homemade Talbot effect
(2022) *Physics Education*, 57 (5), art. no. 055020

Mešić V., Škaljo E., Mitrevski B., Nešić L., Hatibović S., Maličević M.

Seeking missing pieces in learning about single slit diffraction: Results from a teacher survey
(2021) *Physics Education*, 56 (3), art. no. 035024

Saparullah, Purwanto A., Wisnuwijaya R.I., Sari E.K., Dwandaru W.S.B.

Non-contact temperature measurement based on Wien's displacement law using a single webcam in the infrared spectrum region
(2020) *Physics Education*, 55 (2), art. no. 025017

Bokor N.

CD sundials

(2018) *Physics Education*, 53 (1), art. no. 015019

Alti K.

Simple demonstration of optical logic gates using a double-slit diffraction experiment
(2017) *Physics Education*, 52 (3), art. no. 033004

Grebennev I.V., Kazarin P.V.

Demonstration experiment in the study of Fresnel diffraction
(2022) *Physics Education*, 57 (2), art. no. 025020

Aji M.P., Wulandari Y.K., Setiawan R., Karunawan J., Priyanto A.

A unique diffraction pattern formed by a grating from a flying termite wing
(2022) *Physics Education*, 57 (5), art. no. 055026

Chuasontia I., Sirirat T.

Designing an instructional module to teach light diffraction by a grating to secondary students applying a STEM-integrated approach
(2021) *Physics Education*, 56 (4), art. no. 045011

Maurer L.

Simulating interference and diffraction in instructional laboratories
(2013) *Physics Education*, 48 (2), pp. 227 - 232

Dedeler A.P., Ozturk Y.

An easy-to-build optical spectrometer for the Rayleigh scattering investigation of coffee solution
(2023) *Physics Education*, 58 (3), art. no. 035028

Salmoiraghi A., Gratton L.M., Di Mauro M., Onorato P.

Introducing wave-particle duality with low-cost quantitative experiments on light diffraction
(2024) *Physics Education*, 59 (4), art. no. 045036

Rivera-Ortega U.

Using a machine vision sensor for wavelength estimation by measuring an Airy disk, with didactic purposes

(2024) Physics Education, 59 (1), art. no. 015034

Ratanavis A.

A single-slit diffraction experiment for measuring laser beam width

(2022) Physics Education, 57 (3), art. no. 035007

Paix o P.A., Remonatto V.M.C., Calheiro L.B., Dos Reis D.D., Goncalves A.M.B.

Interference and diffraction experiment using 3D printing and Arduino

(2020) Physics Education, 57 (2), art. no. 025011

Rivera-Ortega U., Pico-Gonzalez B.

Wavelength estimation by using the Airy disk from a diffraction pattern with didactic purposes

(2016) Physics Education, 51 (1), art. no. 015012

Mayer V.V., Varaksina E.I.

Setup for studying Fresnel diffraction by photographing diffraction patterns using a smartphone

(2020) Physics Education, 55 (5), art. no. 055020

Singh I., Khun Khun K., Kaur B.

Simulating Fraunhofer diffraction of waves using microsoft excel spreadsheet

(2018) Physics Education, 53 (5), art. no. 055010

Rodrigues M., Marques M.B., Simeão Carvalho P.

How to build a low cost spectrometer with Tracker for teaching light spectra

(2016) Physics Education, 51 (1), art. no. 014002

Whitworth R.W.

A simple diffraction kit

(1979) Physics Education, 14 (2), art. no. 006, pp. 101 - 103

Bunker K.

Using phasors to explain what is actually happening when resonance occurs

(1985) Physics Education, 20 (6), art. no. 004, pp. 281 - 286

Ashworth K., Thompson D.L.

A simple optical diffraction analogue apparatus for use with the laser

(1985) Physics Education, 20 (2), art. no. 413, pp. 83

Eaton T.W.

Fun with fraunhofer

(1977) Physics Education, 12 (4), art. no. 001, pp. 213 - 216

Allen A.R.

Optical diffraction patterns displayed by microcomputer

(1985) Physics Education, 20 (5), art. no. 009, pp. 244 - 245

Dodd N.A.

Computer simulation of diffraction patterns

(1983) Physics Education, 18 (6), art. no. 317, pp. 294 - 299

Cowley L., Laven P., Vollmer M.

Rings around the sun and moon: Coronae and diffraction

(2005) Physics Education, 40 (1), pp. 51 - 59

Springham S.V.

Cost-effective experiments on the diffraction and interference of light

(2000) Physics Education, 35 (1), pp. 64 - 68

Aviani I., Erjavec B.

An easy method to show the diffraction of light

(2011) Physics Education, 46 (2), pp. 134 - 136

George S.

Straight edge diffraction using a laser

(1972) Physics Education, 7 (6), art. no. 004, pp. 349 - 351

Lee W., Lin P.-C., Tseng C.-K.

Diffraction gratings: Compact disc doubles as a chromatic lens

(2004) Physics Education, 39 (5), pp. 384 - 386

Martín M.T., Manrique E., Fernández A.

An experiment with microwave radiation to determine absorption coefficients and defects of wood

(1993) Physics Education, 28 (6), art. no. 011, pp. 386 - 388

Rodrigues M., Simeão Carvalho P.

Teaching optical phenomena with Tracker

(2014) Physics Education, 49 (6), pp. 671 - 677

Darby M.I., Morton N.

Extending the scope of diffraction experiments

(1974) Physics Education, 9 (5), art. no. 317, pp. 361 - 363

Helliwell J.R.

X-ray crystallography

(1995) Physics Education, 30 (6), art. no. 007, pp. 355 - 360

Herreman W., Tieghem E.

The invisible made visible

(1992) Physics Education, 27 (5), art. no. 010, pp. 286 - 287

Kruglak H.

Diffraction demonstration on television

(1989) Physics Education, 24 (6), art. no. 417, pp. 380 - 381

Beard D.S.

Electron diffraction in schools

(1972) Physics Education, 7 (6), art. no. 007, pp. 363 - 367

Field R.

A spreadsheet simulation for a Young's double slits experiment

(1995) Physics Education, 30 (4), art. no. 007, pp. 230 - 235

Cornwall M.G.

CD means colourful diffraction

(1993) Physics Education, 28 (1), art. no. 002, pp. 12 - 14

Kruglyak H.

The compact disc as a diffraction grating

(1991) Physics Education, 26 (4), art. no. 010, pp. 255 - 256

Rogers G.L.

Experiment on a reflection grating used at grazing incidence

(1976) Physics Education, 11 (5), art. no. 005, pp. 346 - 347

Wilkinson C.

The Fresnel 'wave' train

(1989) Physics Education, 24 (6), art. no. 013, pp. 374 - 376

Catelli F., Giovannini O., Bolzan V.D.A.

Estimating the infrared radiation wavelength emitted by a remote control device using a digital camera

(2011) Physics Education, 46 (2), pp. 219 - 222

Vollmer M.

Diffraction revisited: Position of diffraction spots upon rotation of a transmission grating

(2005) Physics Education, 40 (6), pp. 562 - 565

Thompson P.W.

Apparatus to simulate electron diffraction by polycrystalline materials

(1992) Physics Education, 27 (3), art. no. 010, pp. 162 - 163

Fischer R.

Teaching diffraction with hands-on optical spectrometry

(2012) Physics Education, 47 (5), pp. 603 - 607

Graham G.R.

Studies of Fraunhofer diffraction patterns

(1972) Physics Education, 7 (6), art. no. 005, pp. 352 - 360

Ivanov D., Nikolov S.

Demonstrations of wave optics (interference and diffraction of light) for large audiences using a laser and a multimedia projector

(2011) Physics Education, 46 (6), pp. 705 - 709

Mooney R.J.

Coherence - A practical approach

(1985) Physics Education, 20 (1), art. no. 315, pp. 29 - 32

Kockelmann W., Kirfel A., Siano S., Frost C.D.

Illuminating the past: The neutron as a tool in archaeology

(2004) Physics Education, 39 (2), pp. 155 - 165

Grattan T., Jamison K.

Optical electron diffraction can be demonstrated with home-made kit

(2004) Physics Education, 39 (4), pp. 320 - 322

Maurer L.

Simulating interference and diffraction in instructional laboratories

(2013) Physics Education, 48 (2), pp. 227 - 232

Widiatmoko E., Widayani, Budiman M., Abdullah M., Khairurrijal

A simple spectrophotometer using common materials and a digital camera

(2011) Physics Education, 46 (3), pp. 332 - 339

Ivanov D.T., Nikolaev S.

White-light diffraction with a CD

(2010) Physics Education, 45 (3), pp. 227 - 228

Eaton T.W., Wiseman D.

An arrangement for observing Fresnel diffraction

(1976) Physics Education, 11 (4), art. no. 005, pp. 292 - 293

Gluck P.

A diffraction grating for sound waves

(2003) Physics Education, 38 (4), pp. 285 - 286

Glynn T.J.

The diffraction grating experiment revisited

(1993) Physics Education, 28 (3), art. no. 011, pp. 187 - 190

Morton N.

Diffraction at a straight edge

(1983) Physics Education, 18 (5), art. no. 104, pp. 207 - 208

Atkin K.

A simple diffraction/interference pattern scanner constructed from inkjet-printer parts

(2013) Physics Education, 48 (2), pp. 190 - 193

Kruglak H.

Brownian motion - A laboratory experiment

(1988) Physics Education, 23 (5), art. no. 313, pp. 306 - 309

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Thomas Young and the theory of diffraction

(1979) Physics Education, 14 (7), art. no. 324, pp. 450 - 453

Baum R.

An experiment using a data-logger in the investigation of diffraction patterns

(1993) Physics Education, 28 (6), art. no. 009, pp. 382 - 383

Bridge N.J.

A novel effect of scattered-light interference in misted mirrors

(2005) Physics Education, 40 (4), pp. 359 - 364

Michelutti G.L., Della Giusta G.

Fraunhofer diffraction revisited

(1993) Physics Education, 28 (4), art. no. 008, pp. 238 - 242

Singh S.

My way: Diffraction method measures refractive indices of liquids

(2004) Physics Education, 39 (3), pp. 235

Avvari R.K.

Two-Dimensional Diffraction Pattern by a Silk Cloth

(2020) Physics Teacher, 58 (1), pp. 46 - 47

Fakhruddin H.

Quantitative investigation of thermal expansion using single-slit diffraction

(2006) Physics Teacher, 44 (2), pp. 82 - 84

Kuhn J., Vogt P.

Diffraction experiments with infrared remote controls

(2012) Physics Teacher, 50 (2), pp. 118 - 119

Greenslade T.B., Jr.

Wire diffraction gratings

(2004) Physics Teacher, 42 (2), pp. 76 - 77

Kang C.-W., Nam H.-J., Kim J.B.

Pseudo-Double-Slit Experiment with Two Glass Plates

(2020) Physics Teacher, 58 (9), pp. 649 - 651

Dale D.A., Bailey B.L.

Physics in the art museum

(2003) Physics Teacher, 41 (2), pp. 82 - 83

Wagner T., Hoyer C., Ringl C., Kuhn J.

Investigating diffraction phenomena with low-cost material and augmented reality

(2023) Physics Teacher, 61 (5), pp. 402 - 403

Papacosta P., Linscheid N.

The confirmation of the inverse square law using diffraction gratings

(2014) Physics Teacher, 52 (4), pp. 243 - 245

Shakur A., Binz S.

Diffraction Experiments with a Smart Cart

(2021) Physics Teacher, 59 (4), pp. 272 - 274

Logiurato F., Gratton L.M., Oss S.

Optical simulation of Debye-Scherrer crystal diffraction

(2008) Physics Teacher, 46 (2), pp. 109 - 112

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Two-Dimensional Light Diffraction from an EPROM Chip

(2018) Physics Teacher, 56 (2), pp. 70 - 71

Gratton L.M., Perini M., Zabetti V.

Compact fluorescent lamp observed through a diffraction grating

(2004) Physics Teacher, 42 (5), pp. 270 - 271

Wang J., Sun W.

A diffraction experiment with a peep-proof protection film of a cell phone using a spectrometer

(2019) Physics Teacher, 57 (4), pp. 268

Van Dongen J., Rieger G.

A resource for using real-world examples in the physics classroom

(2013) Physics Teacher, 51 (2), pp. 105 - 107

Davidović M., Bozić M.

Geometrical, Fresnel, and Fraunhofer Regimes of Single-Slit Diffraction

(2019) Physics Teacher, 57 (3), pp. 176 - 178

Ouseph P.J.

CD rainbows

(2007) Physics Teacher, 45 (1), pp. 11 - 13

Ouseph P.J.

Refraction of diffracted light

(1998) Physics Teacher, 36 (7), pp. 420 - 421

Kutzner M., Wright R., Kutzner E.

An inexpensive LED light sensor

(2010) Physics Teacher, 48 (5), pp. 341 - 343

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Making light rays visible in 3-D

(2007) Physics Teacher, 45 (1), pp. 46 - 48

Chiang C.-M., Ma S.-H., Lin S.-T., Hsu W.-H., Huang P.-J.

Application of Optical Path Drawing Technology: The Light Intensity Problem of Double-Slit Interference

(2022) Physics Teacher, 60 (6), pp. 457 - 459

Messer R.

Single slit interference made easy with a strand of hair and a laser
(2018) Physics Teacher, 56 (1), pp. 58 - 59

DeWeerd A.J.

CD, DVD, and Blu-ray disc diffraction with a laser ray box
(2016) Physics Teacher, 54 (5), pp. 300 - 301

Organtini G.

Interference of Two Point Sources Using Smartphones
(2021) Physics Teacher, 59 (9), pp. 709 - 711

Teng B., Teng P., Hennekens C.H.

A Simple Way to Teach Single Slit Diffraction Based on Edge Diffraction
(2018) Physics Teacher, 56 (6), pp. 380 - 383

Braun G., Tierney D., Schmitzer H.

How rosalind Franklin discovered the helical structure of DNA: Experiments in diffraction
(2011) Physics Teacher, 49 (3), pp. 140 - 143

Faust C., Ashman S.

An Affordable Self-Built Spectrometer for the Physics and Astronomy Classroom: A Useful Teaching Tool and Demonstration Instrument
(2021) Physics Teacher, 59 (8), pp. 617 - 620

Deweerd A.

Inexpensive Single and Double Slits Using a Fine-Toothed Comb
(2022) Physics Teacher, 60 (5), pp. 380 - 381

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Demonstrating the relationship between the energy and frequency of light
(2000) Physics Teacher, 38 (3), pp. 152

Narayanan V.A.

Low-cost diffraction experiment
(1996) Physics Teacher, 34 (6), pp. 382 - 382

De Pino A., Jr.

Diffraction patterns using a constant-velocity cart
(2002) Physics Teacher, 40 (7), pp. 418 - 419

Rabosky K., Inglefield C., Spirito K.

Interference and Diffraction in Modern Technology: A New Approach for an Introductory Physics Laboratory Experiment
(2020) Physics Teacher, 58 (9), pp. 646 - 648

Easton D.

Transmission through crossed polaroid filters
(2001) Physics Teacher, 39 (4), pp. 231 - 233

Panuski C.L., Mungan C.E.

Single-slit diffraction: Transitioning from geometric optics to the fraunhofer regime
(2016) Physics Teacher, 54 (6), pp. 356 - 359

Ferguson J.L.

Wedding PC interfaces to interference and diffraction experiments
(1996) Physics Teacher, 34 (2), pp. 124 - 125

Chen Y., Kim H.R., Ahn Y.J., Kim J.B.

Geometric Optical Experiments Using Water Mixed with Highlighter Ink
(2022) Physics Teacher, 60 (9), pp. 765 - 767

Torcal-Milla F.J.

Diffraction of light through a hummingbird's wings
(2023) Physics Teacher, 61 (9), pp. 816

Bauman R.P.

Diffraction and non-diffraction fringes
(1996) Physics Teacher, 34 (6), pp. 339 - 339

Mauser M.

Experiencing light's properties within your own eye
(2011) Physics Teacher, 49 (1), pp. 19 - 21

Graney C.M.

Objects in telescope are farther than they appear: How diffraction tricked galileo into mismeasuring distances to the stars
(2009) Physics Teacher, 47 (6), pp. 362 - 365

Velentzas A.

Teaching diffraction of light and electrons: Classroom analogies to classic experiments
(2014) Physics Teacher, 52 (8), pp. 493 - 496

Van Hook S.J.

Inquiry with laser printer diffraction gratings
(2007) Physics Teacher, 45 (6), pp. 340 - 343

Gluck P.

Compact disk optics
(2002) Physics Teacher, 40 (8), pp. 468 - 469

Rylander J.W., Miller J.J.

Diffraction patterns with light and motion sensors
(1999) Physics Teacher, 37 (2), pp. 106 - 107

Planinšič G., Corona A., Slisko J.

Rainbow-like spectra with a CD: An active-learning exercise
(2008) Physics Teacher, 46 (6), pp. 329 - 333

Suda Y., Suko M., Okuno T.

Analysis of Single- and Double-Slit Diffraction Patterns Using Hair
(2026) Physics Teacher, 64 (2), pp. 123 - 125

Birriel J.J.
Diffraction by "sheer coincidence"
(2018) Physics Teacher, 56 (9), pp. 648 - 649

Wahab M.F.
Estimating the wavelength of sodium emission in flame - the easy way
(2009) Physics Teacher, 47 (6), pp. 367 - 369

Mungan C.E.
Approximation for the rayleigh resolution of a circular aperture
(2009) Physics Teacher, 47 (5), pp. 288 - 289

Sharpe J.P., Yee C.
Young's Two-Slit Experiment without a Laser
(2021) Physics Teacher, 59 (6), pp. 420 - 421

Isenberg C.
Laser diffraction experiments with pseudoliquids and pseudosolids
(2000) Physics Teacher, 38 (7), pp. 411 - 413

Groff J.R.
Estimating the size of onion epidermal cells from diffraction patterns
(2012) Physics Teacher, 50 (7), pp. 420 - 423

Huang D.-W., Huang W.-N., Tseng H.-C.
Eyeglasses in the classroom
(2010) Physics Teacher, 48 (1), pp. 12 - 13

Gluck P.
Teaching image formation by a lens
(2006) Physics Teacher, 44 (4), pp. 206 - 210

Chiang C.-M., Ma S.-H., Wu J.-Y., Hung Y.-C.
3-D optical path drawing method
(2019) Physics Teacher, 57 (3), pp. 179 - 181

Houser B.
Demonstrating the decreased wavelength of light in water
(2001) Physics Teacher, 39 (4), pp. 228 - 229

Tao J., Zhou R., Zhiqiang Y., Cheng Q., Zhu X.
Problem-Based Learning via X-Shaped Diffraction Patterns Using Everyday Objects
(2025) Physics Teacher, 63 (9), pp. 757 - 761