

Reactive ion plasma etched surface relief gratings for low/medium/high resolution spectroscopy in astronomy (Erratum)

Hanshin Lee^{a,*} and Menelaos K. Poutous^b

^aUniversity of Texas at Austin, McDonald Observatory, Austin, Texas, United States

^bUniversity of North Carolina at Charlotte, Department of Physics and Optical Science, Charlotte, North Carolina, United States

[DOI: [10.1117/1.JATIS.8.4.049801](https://doi.org/10.1117/1.JATIS.8.4.049801)]

This article [*J. Astron. Telesc. Instrum. Syst.* 8(4), 045002 (2022) <https://doi.org/10.1117/1.JATIS.8.4.045002>] was originally published with two figures reversed. Figure 1 was placed over the caption for Fig. 2, and Fig. 2 was placed over the caption of Fig. 1. The figures appear with their correct captions below. The article was corrected on 13 December 2022.

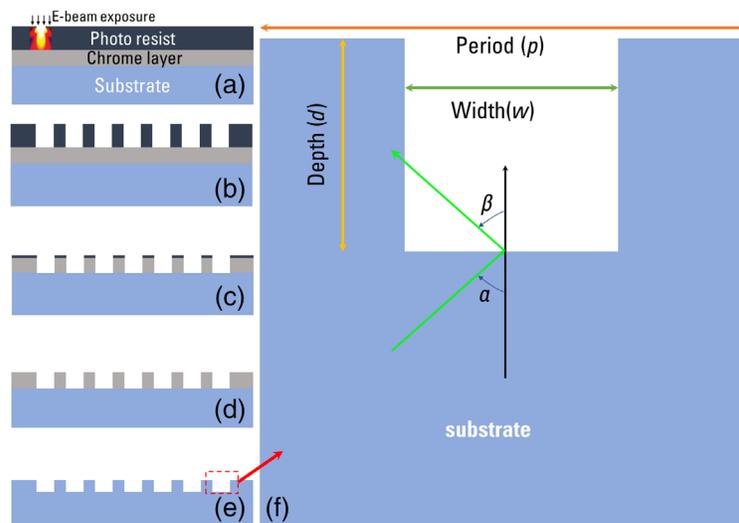


Fig. 1 An illustration of a binary-phase RIPPLE grating and its fabrication process. (a) A grating line pattern is written in a thin layer of photo-resist by electron-beam exposure. (b) The developed photoresist is removed from the exposed spaces, uncovering the underlying chromium layer. (c) The chromium layer is etched-out from the photoresist grating grooves, leaving the substrate surface exposed. (d) The resist layer is washed away. (e) The grating grooves are etched into the substrate, using the chrome lines as a mask. (f) Schematic of a single grating period structured, with the feature parameters marked. The duty cycle is defined by w/p .

*Address all correspondence to Hanshin Lee, lee@astro.as.utexas.edu

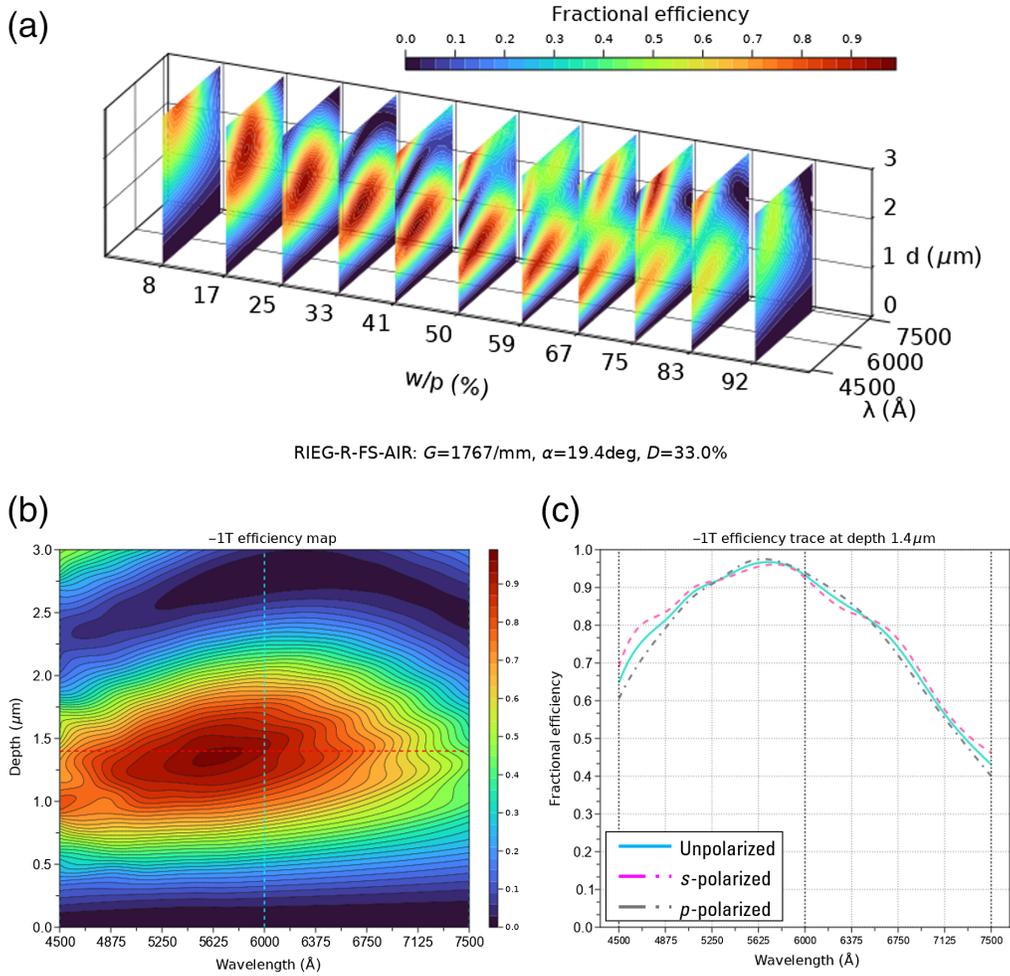


Fig. 2 The first-order DE model of the POC RIPLE grating. (a) Slices of the RCWA computed efficiency cube used in optimizing w and d and (b) the efficiency map over λ and d for $w/p = 33\%$, locating the optimal depth within the range between 1.3 and 1.5 μm for maximum overall efficiency. (c) The wavelength slice at $d = 1.4 \mu\text{m}$, where the efficiency peaks at 96.7% and stays over 70% over the wavelength range of 230 nm from 454 to 685 nm. Makie.jl was used to produce these plots.⁶