Search All Publications





# DSA

## JOURNALS (/ABOUT.CFM) CONFERENCES (/CONFERENCES.CFM) OTHER RESOURCES

MY FAVORITES

JOURNAL HOME (/OL/HOME.CFM)

ABOUT (/OL/JOURNAL/OL/ABOUT.CFM)

ISSUES IN PROGRESS (/OL/UPCOMINGISSUE.CFM)

CURRENT ISSUE (/OL/ISSUE.CFM)

ALL ISSUES (/OL/BROWSE.CFM)

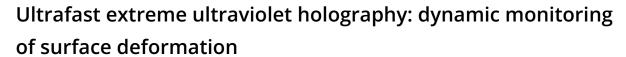
EARLY POSTING (/OL/UPCOMING.CFM)

Optics Letters Vol. 32, Issue 3 (/ol/issue.cfm?volume=32&issue=3), pp. 286-288 (2007) • https://doi.org/10.1364/OL.32.000286 (https://doi.org/10.1364/OL.32.000286)



# Not Accessible

Your library or personal account may give you access



Ra'anan I. Tobey, Mark E. Siemens, Oren Cohen, Margaret M. Murnane, Henry C. Kapteyn, and Keith A. Nelson

Author Information ▼ Q Find other works by these authors ▼



Get PDF (viewmedia.cfm?uri=ol-32-3-286&seq=0)



Group: https://opg.optica.org)

% 99 ((!) Share ▼ Get Citation ▼ Citation alert Save article (/user/favorites\_add\_article.cfm?articles=122688)

#### **PDF Article**

(viewmedia.cfm?uri=ol-32-3-286&seq=0)

Abstract

Full Article (viewmedia.cfm? uri=ol-32-3-286&seq=0&html=true)

Figures (3)

Equations (1)

References (14)

Cited By

Metrics

Back to Top

#### **Abstract**

We demonstrate femtosecond time-resolved dynamic Gabor holography using highly coherent extreme ultraviolet light generated by high harmonic upconversion of a femtosecond laser. By reflecting this light from an impulsively heated surface, we implement a simple and robust single-reflection geometry for phase-sensitive holographic detection at extreme UV wavelengths. Using this setup, we study the ultrafast deformation and subsequent acoustic oscillations within a thin metal film. These measurements exhibit subpicometer spatial sensitivity in the vertical dimension.

© 2007 Optical Society of America

Full Article (viewmedia.cfm?uri=ol-32-3-286&seq=0&html=true) | PDF Article (viewmedia.cfm?uri=ol-32-3-286&seq=0)

## More Like This



Femtosecond off-axis digital holography for monitoring dynamic surface deformation (/ao/abstract.cfm?uri=ao-49-13-2510)

Linwei Zhu, Changhe Zhou, Tengfei Wu, Wei Jia, Zhongwei Fan, Yunfeng Ma, and Gang Niu

Appl. Opt. 49(13) 2510-2518 (2010)

Resolving dynamics of acoustic phonons by surface plasmons (/ol/abstract.cfm? uri=ol-32-6-719)

#### **Related Topics**

Table of Contents Category
Optics at Surfaces

Optics & Photonics Topics Extreme ultraviolet (search.cfm? t=Physics | Electromagnetic radiation | Extreme ultraviolet) High harmonic generation (search t=Nonlinear optics | Harmonic generation | High harmonic generation Thin films (search.cfm?t=Thin film Ti:sapphire lasers (search.cfm? t=Optical systems | Laser systems | Ti:sapphire lasers) Ultraviolet radiation (search.cfm? t=Physics | Electromagnetic radiation | Ultraviolet radiation) Upconversion lasers (search.cfm? t=Optical systems | Laser systems | Upconversion lasers)

Previously assigned OCIS codes Photothermal effects (190.4870) Thin films (240.0310)



Jincheng Wang, Jian Wu, and Chunlei Guo Opt. Lett. **32**(6) 719-721 (2007) Spectroscopy, surface (240.6490) Ultrafast nonlinear optics (320.7110)

Original Manuscript: August 29, 2006 Revised Manuscript: October 13, 2006 Manuscript Accepted: October 24, 2006

#### **About this Article**

Published: January 12, 2007

History



At-wavelength inspection of sub-40 nm defects in extreme ultraviolet lithography mask blank by photoemission electron microscopy (/ol/abstract.cfm?uri=ol-32-13-1875)

Jingquan Lin, Nils Weber, Jochen Maul, Stefan Hendel, Karsten Rott, Michael Merkel, Gerd Schoenhense, and Ulf Kleineberg

Opt. Lett. 32(13) 1875-1877 (2007)

View More...

Next Article ▷ (abstract.cfm?uri=ol-32-3-289)



Publishing Home (/)
Journals (/about.cfm)

Conferences (/conferences.cfm)

- By Year (/conferences.cfm)
- By Name (/conferences.cfm? findby=conference)

INFORMATION FOR
Authors (/author/author.cfm)
Reviewers (/reviewer/)
Librarians (/library/)

OPEN ACCESS INFORMATION

Open Access Statement and Policy (/submit/review/open-access-policy-

statement.cfm)

Terms for Journal Article Reuse (/library/license\_v2.cfm)

OTHER RESOURCES

Optica Publishing Group Bookshelf

(/books/default.cfm)

**Industry Reports** 

(/industryreports.cfm)

Optics & Photonics News 🗹

(https://www.optica-

opn.org/home/)

Optics ImageBank 🗹

(https://imagebank.optica.org)
Spotlight on Optics (/spotlight/)

**ABOUT** 

About Optica Publishing Group

(/about.cfm)

About My Account (/benefitslog.cfm)

Contact Us (/contactus.cfm)

Send Us Feedback

Optica Home

(https://www.optica.org)

My Favorites •

Recent Pages

(HTTPS://WWW.TWITTER.COM/OPTIC

(HTTPS://WWW.FACEBOOK.COM/OP

(HTTPS://WWW.LINKEDIN.COM/COM

WORLDWIDE/)

(/TOC\_ALERTS\_SUBSCRIBE.C

© Copyright 2022 | Optica Publishing Group. All Rights Reserved

Privacy (/privacy.cfm) | Terms of Use (/term: