Electronic Supplementary Information

Plasmonic Photothermal Properties of Silver Nanoparticle Grating Films

Siriporn Anuthum,[ab] Fugo Hasegawa,[a] Chutiparn Lertvachirapaiboon,[a] Kazunari Shinbo,[a] Keizo Kato,[a] Kontad Ounnunkad,*[b] and Akira Baba*[a]

Graduate School of Science and Technology, Niigata University, 8050 Ikarashi-2-nocho, Nishi-ku, Niigata 950-2181, Japan.
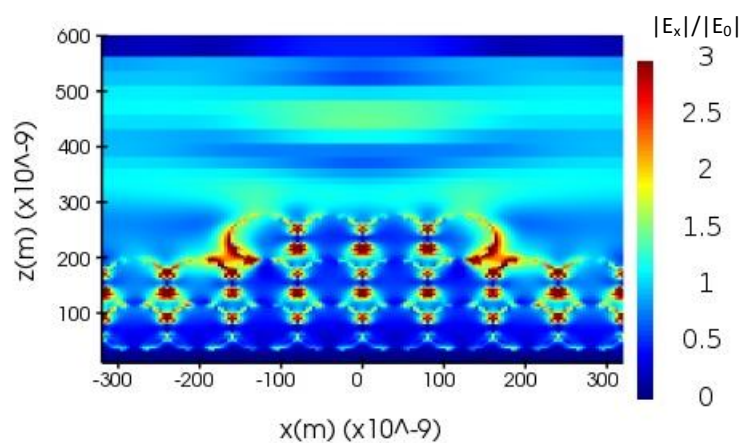
E-mail: ababa@eng.niigata-u.ac.jp

Department of Chemistry and Center of Excellence for Innovation in Chemistry (PERCH-CIC), Faculty of Science, Chiang Mai University, Chiang Mai 50200, Thailand.
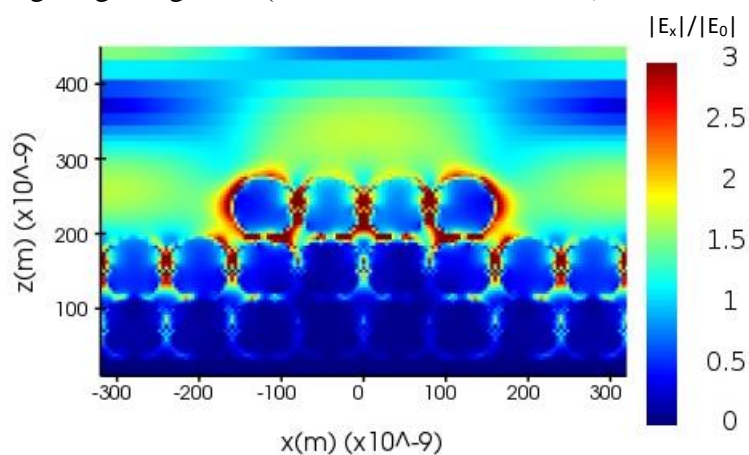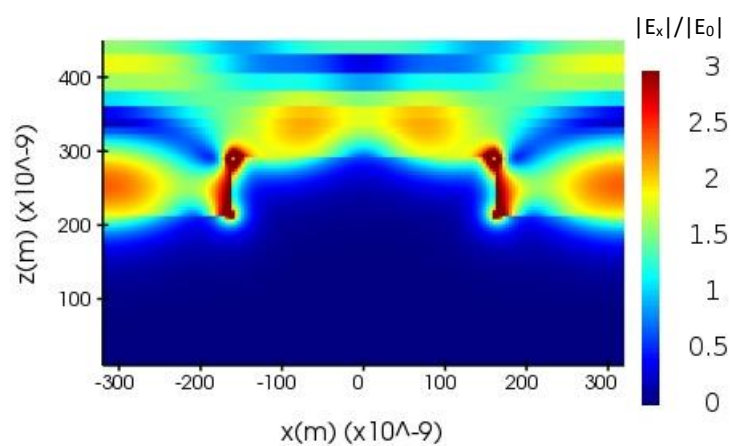
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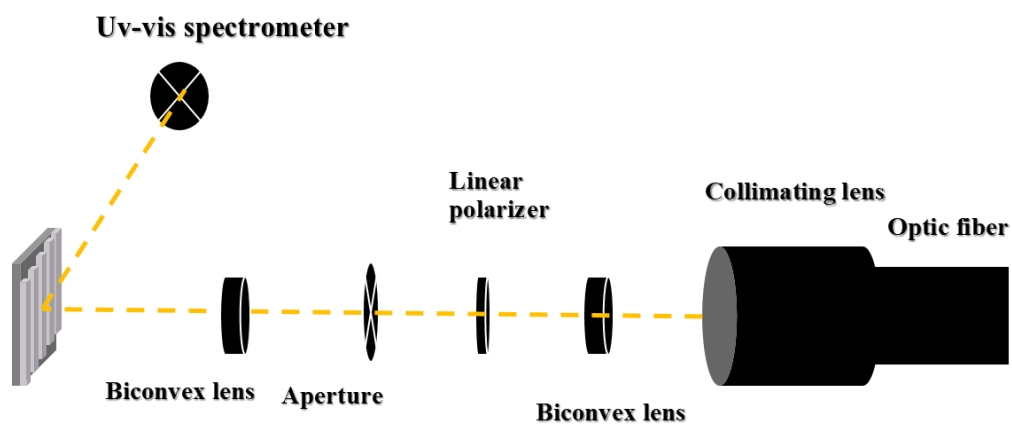
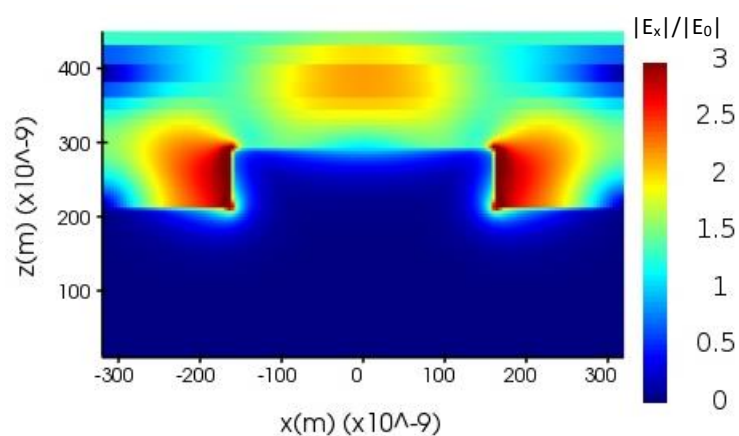**Figure S1.** Schematic of the SPR reflectivity measurement of fabricated plasmonic photothermal films

AgNP grating film ($\Lambda = 640$ nm, $\lambda = 450$ nm)

AgNP grating film   ($\Lambda = 640$ nm, $\lambda = 660$ nm)
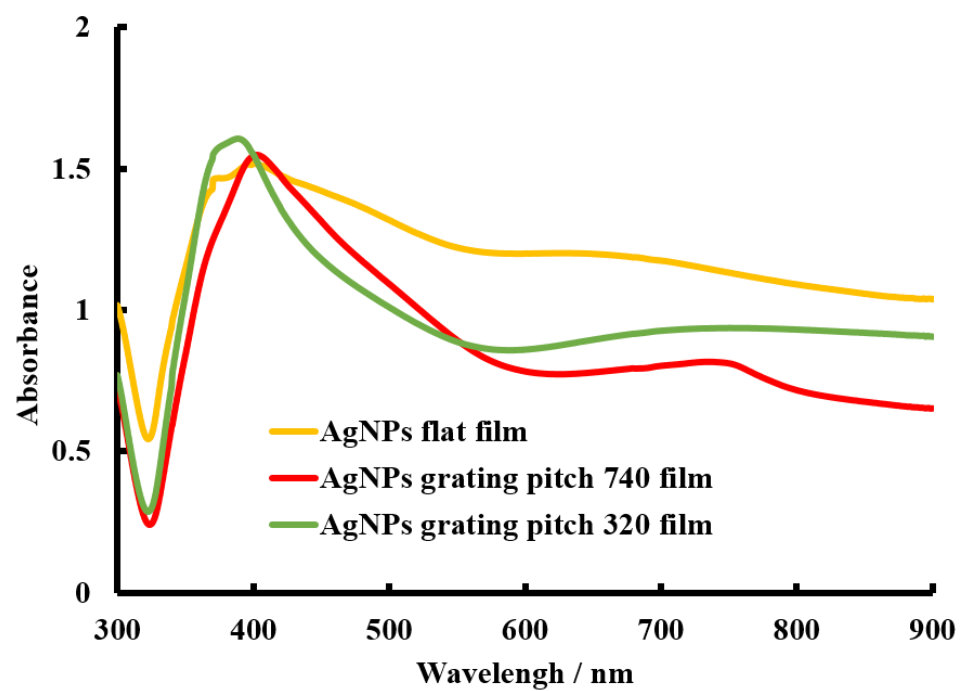
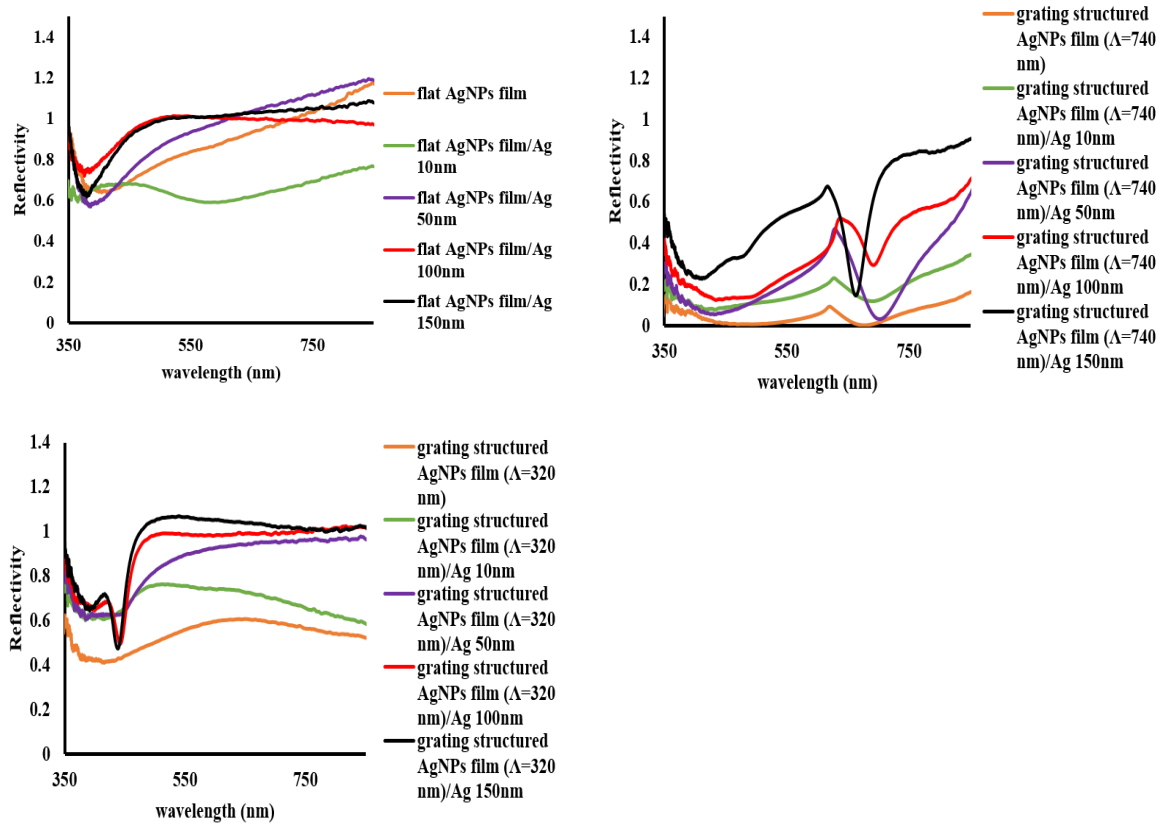non-NP Ag grating film (Λ = 640 nm, λ = 450 nm)

non-NP Ag grating film (Λ = 640 nm, λ = 660 nm)

Figure S2. Electric field distributions at an incident light angle of 0° with p-polarization obtained from the FDTD simulation with the grating pitch of 640 nm

Figure S3. UV–visible absorption property of a sufficiently thin spin-coated AgNP film and AgNP grating films on glass substrate

Figure S4. Reflectivity curves of the AgNP film/evaporated Ag film and AgNP grating film

(Λ = 320 nm and 740 nm)/evaporated Ag film as a function of thickness of the evaporated Ag
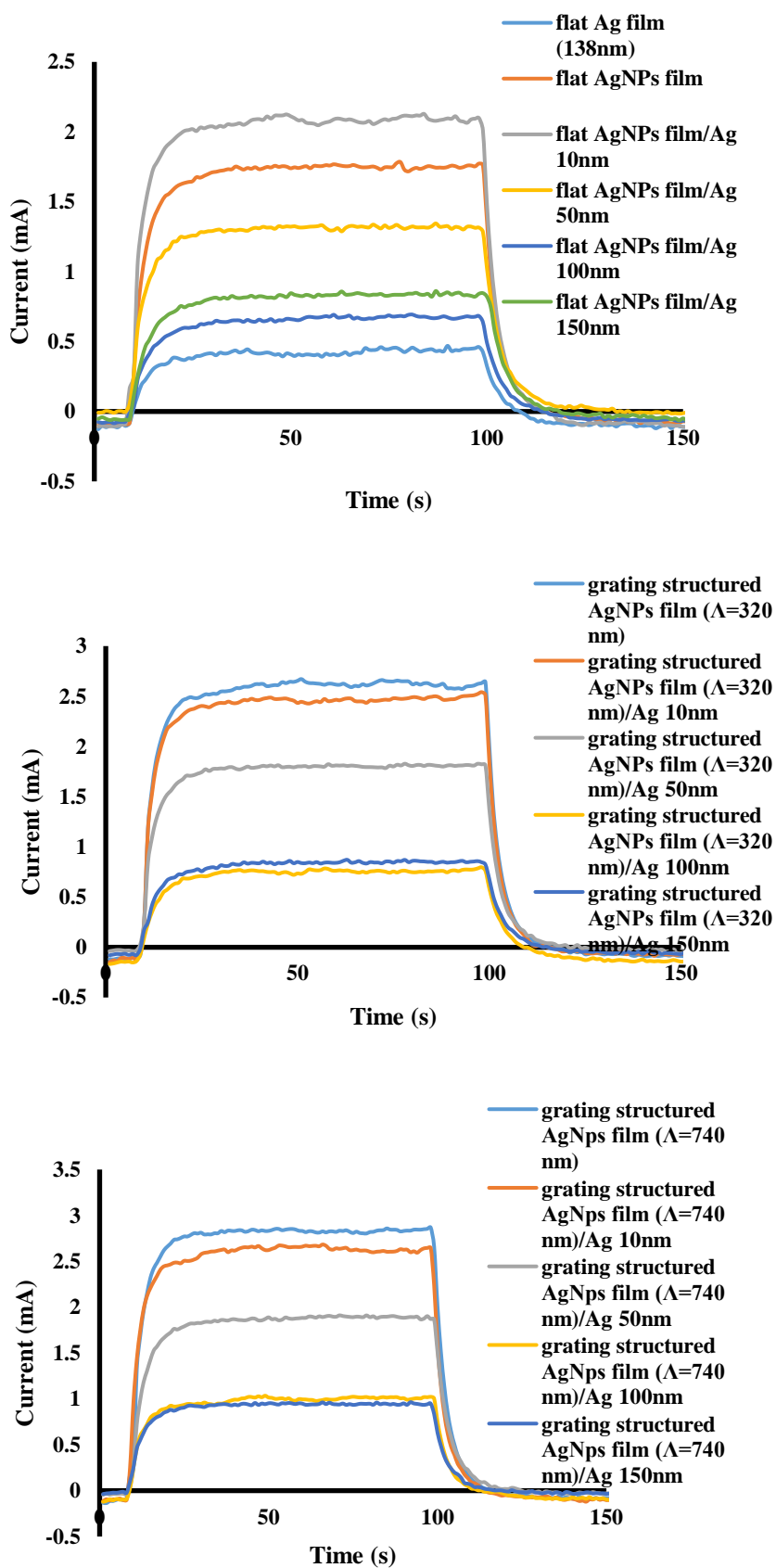
film at an incident light angle of 10° with p-polarization

Figure S5. Generated current versus time upon illumination