

**Supporting Information**

**High second-order nonlinear response of platinum nanoflowers: the role of surface corrugation**

*Hoang Minh Ngo, Ngoc Diep Lai and Isabelle Ledoux-Rak\**

*Laboratoire de Photonique Quantique et Moléculaire, UMR 8537, Ecole Normale Supérieure de Cachan, CentraleSupélec, CNRS, Université Paris-Saclay, 94235 Cachan, France.*

**Table S1** The recalculated  $\beta$  and  $\beta'$  values inferred from data by Galletto et al.<sup>15</sup> in AuNSs using their reported  $\beta$  values per nanoparticle corrected (i) from correct  $\beta_{H2O}$  values (0.055 instead of  $0.56 \times 10^{-30}$  esu)<sup>11</sup> and (ii) using Eq. 2.

Gold colloid	Diameter (nm)	$\beta$ per particle ( $\beta$ ) ( $\times 10^{-26}$ esu)	$\beta$ per Au atom ( $\beta'$ ) ( $\times 10^{-30}$ esu)	Surface area (nm <sup>2</sup> )
a	4.9	0.6	100	80
b	8.6	2.0	143	230
c	19.0	13.1	286	1130
d	22.0	16.6	291	1520