Corrosion Inhibition of Mild Steel and 304 Stainless Steel in 1 M Hydrochloric Acid Solution by Tea Tree Extract and Its Main Constituents

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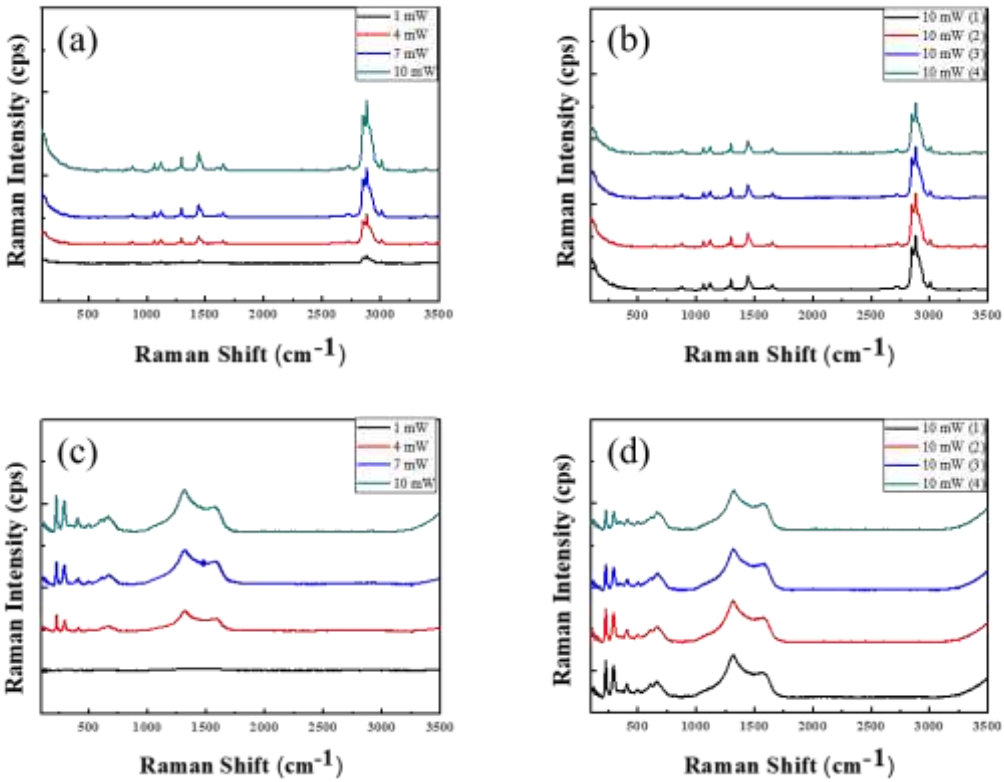

Figure S1. Raman spectra analyzed with 1, 4, 7, and 10 mW laser power from (**a**,**b**) the extract itself and (**c**,**d**) the corroded surface of the MS specimen without the extract. Thermal degradation with 10 mW laser power was checked via repetitive analysis at one spot, as shown in (**b**,**d**).

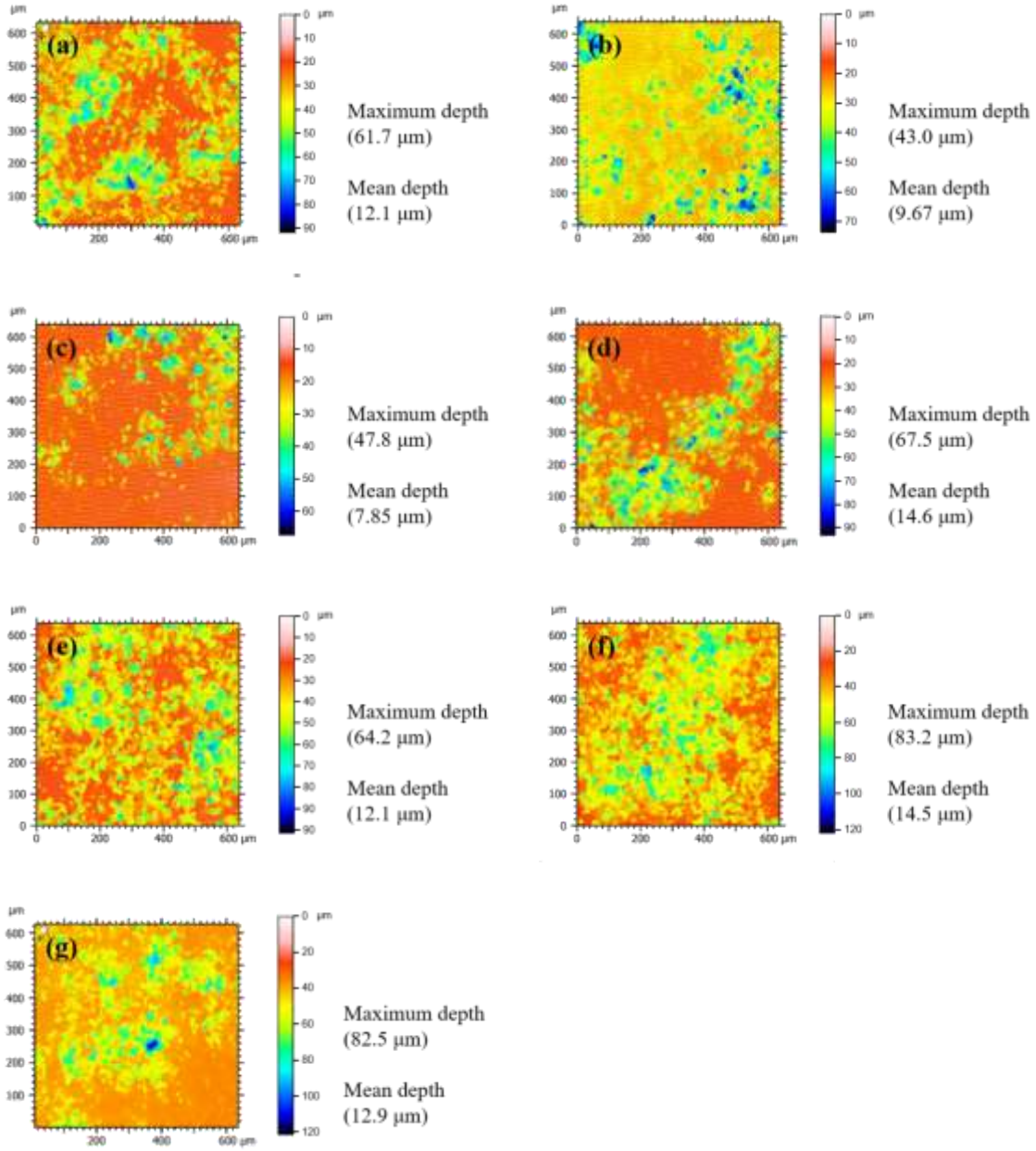

Figure S2. (**a**–**g**) LSCM images showing the surface morphology of corroded 304 STS specimens after immersion in 1M HCl solution at 298 K without tea tree extract.

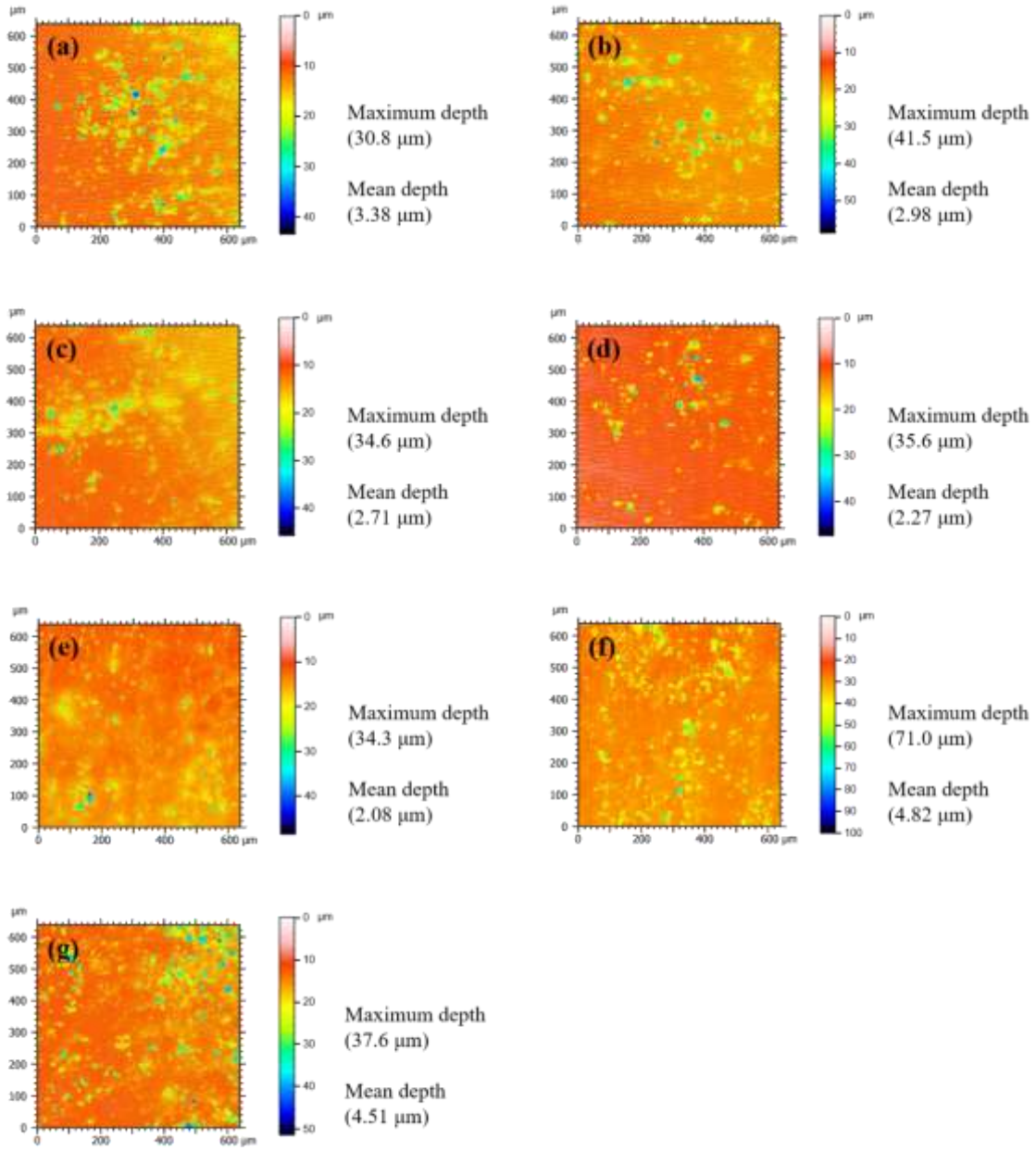

Figure S3. (**a–g**) LSCM images showing the surface morphology of corroded 304 STS specimens after immersion in 1M HCl solution at 298 K with 0.75 g/L of tea tree extract.

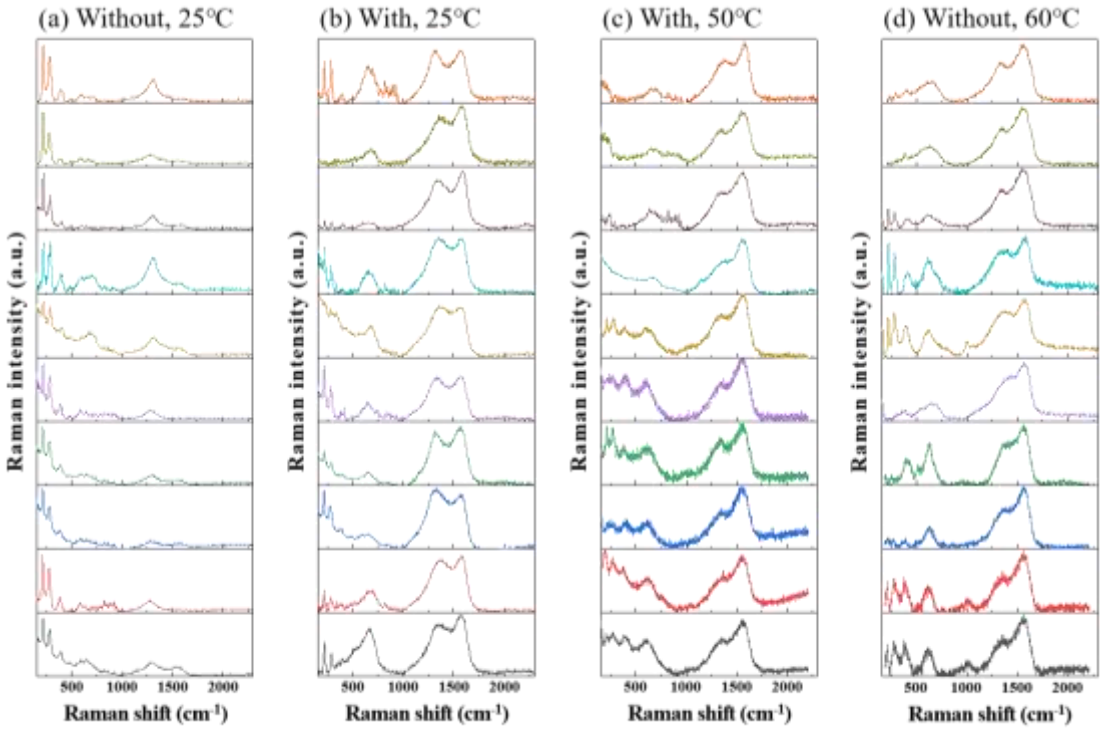

Figure S4. Raman spectra analyzed from the surface of MS specimens after immersion for 24 h in 1 M HCl solution at (**a**,**b**) 298, (**c**) 323 and (**d**) 333 K with 0.75 g/L of tea tree extract.

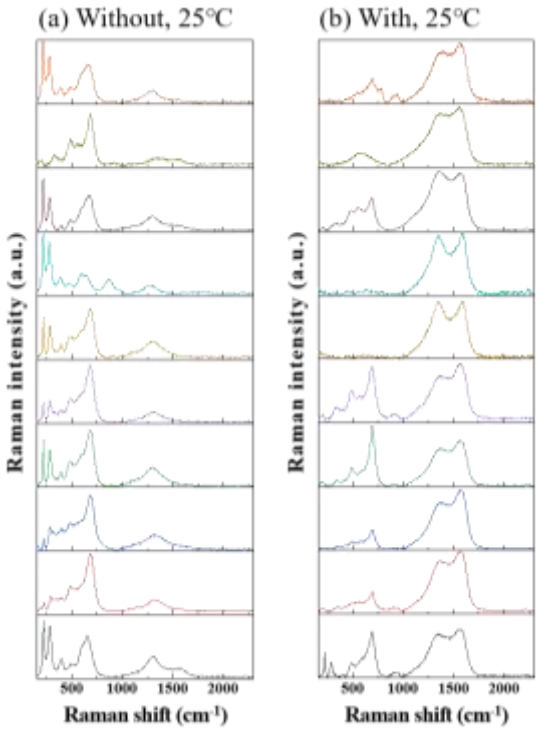

Figure S5. Raman spectra analyzed from the surface of STS specimens after immersion for 168 h in 1 M HCl solution at 298 K (**a**) without and (**b**) with 0.75 g/L of tea tree extract.

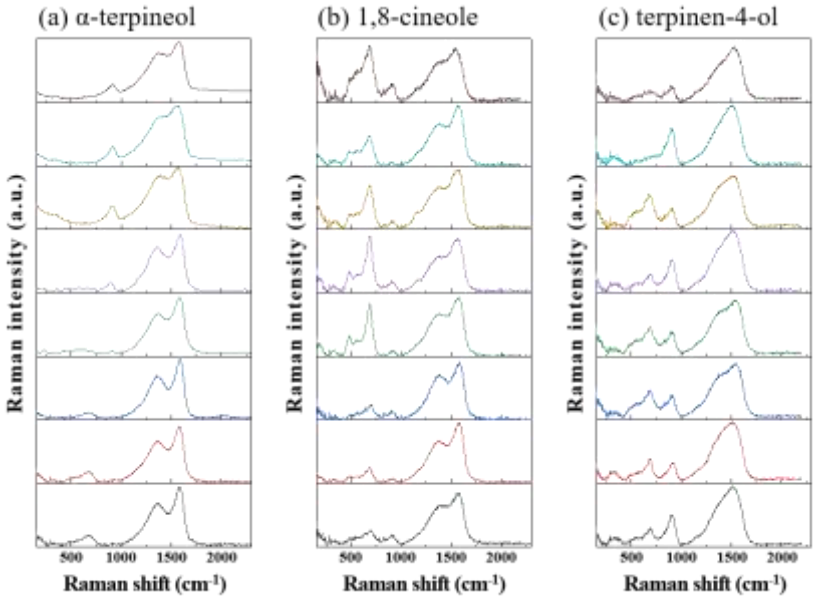

Figure S6. Raman spectra analyzed from the surface of STS specimens after immersion for 168 h in 1 M HCl solution at 298 K with 0.75 g/L of (**a**) α-terpineol, (**b**) 1,8-cineole and (**c**) terpinen-4-ol.

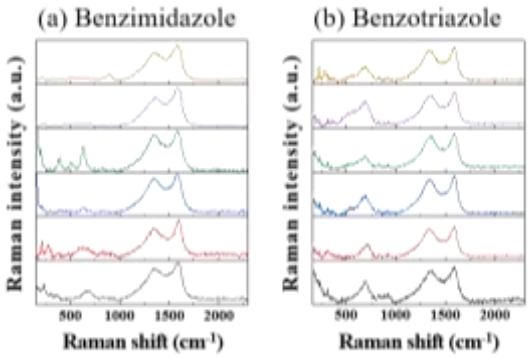

Figure S7. Raman spectra analyzed from the surface of STS specimens after immersion for 168 h in 1 M HCl solution at 298 K with (**a**) benzimidazole and (**b**) benzotriazole.