μ-Raman surface mapping of antique silver coins

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Proposed assignments

AgCl (Chlorargyrite)

Raman shift (cm^{-1})		Vibrational mode	References	
Literature data	**Our data**		**Exp.**	**Calc.**
154	151	Ag lattice	1, 2	
236 — 239	241	v(Ag-Cl)	1, 2	

Ag_2S (Acanthite)

Raman shift (cm^{-1})		Vibrational mode	References	
Literature data	**Our data**		**Exp.**	**Calc.**
170 — 280	180 — 200	v(Ag-S-Ag)	2, 3, 4, 5	6
		radial breathing mode in $(AgS)_n$ clusters	5	7
430 —490	460	2^{nd} order mode	5, 8	6
		δ(O-S-O), cluster species / photo-decomposition product	3, 4	

Ag_xCu_yS (Stromeyerite, Mckinstryite, Jalpaite)

Raman shift (cm^{-1})		Vibrational mode	References	
Literature data	**Our data**		**Exp.**	**Calc.**
147	151	Ag lattice	9	
228 — 232	180 — 200	v(Ag–S)	9	
258 — 285	245 — 260	v(Ag–S-Cu)	9	

CuO (Tenorite)

Raman shift (cm^{-1})		Vibrational mode	References	
Literature data	**Our data**		**Exp.**	**Calc.**
296 — 303	300	A_g	1	10
632 — 639	610	B_g	1	10

TiO_2 (Rutile)

Raman shift (cm^{-1})		Vibrational mode	References	
Literature data	**Our data**		**Exp.**	**Calc.**
426 — 466	445	E_g	11	12
579 — 615	608	A_{1g}	11	12

TiO_2 (Anatase)

Raman shift (cm^{-1})		Vibrational mode	References	
Literature data	**Our data**		**Exp.**	**Calc.**
140 — 157	145	E_g	11	12
359 — 197	400	B_{1g}	11	12
493 — 527	515	A_{1g}, B_{1g}	11	12
636 — 692	637	E_g	11	12

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