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Supplementary file

**A novel heterometallic compound for design and
electrical properties of silver nanoparticles decorated
lead compounds**

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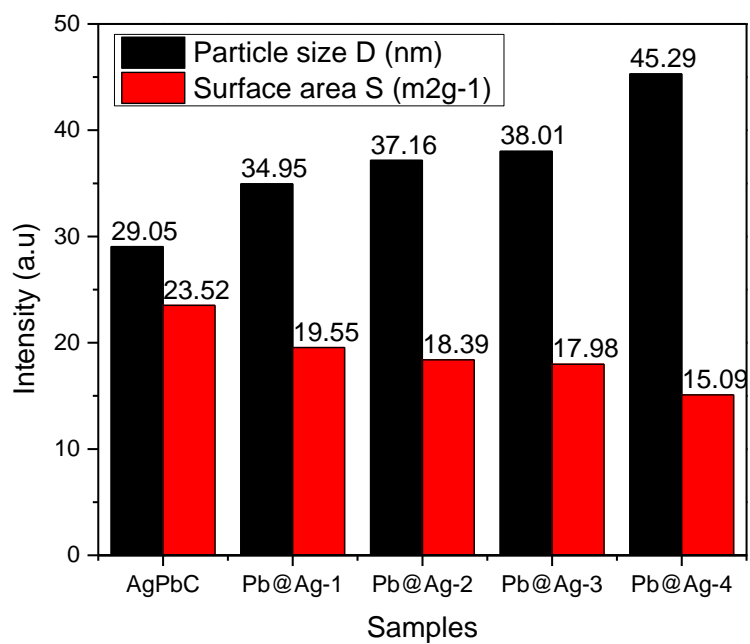


Figure S1 relation between particle sizes and surface area for the composite materials.

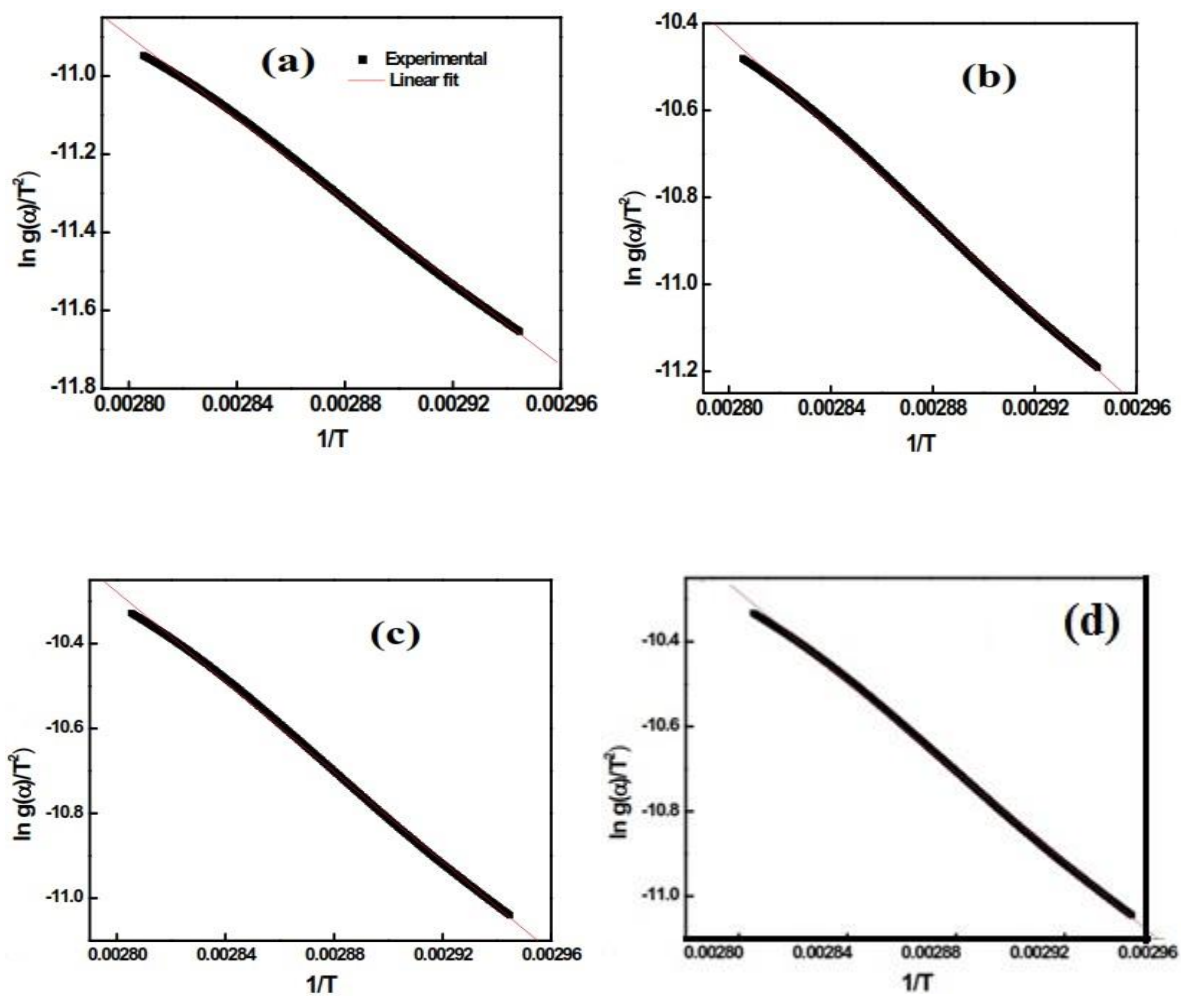


Figure S2 Linearization curves obtained by Coats-Redfern method for (a) AgPb-1 and its calcination products, (b) AgPb-2, (c) AgPb-3 and (d) AgPb-5 samples.

Table S1 Thermodynamic parameters from TGA of the studied composites.

Compound	Decomposition range (°C)	E^* (kJ mol ⁻¹)	A (S ⁻¹)	S^* (kJ mol ⁻¹)	H^* (kJ mol ⁻¹)	G^* (kJ mol ⁻¹)
AgPb-1	20-135	3205.0082	7.23E-05	-.3646	1.8081681	125652.17
	136-234	27039.404	5.01E+00	-.4173	23095.724	134683.55
	235-381	15327.606	1.63E-01	-.7935	10360.566	169039.27
	382-800	13597.95	7.16E-04	-.2945	7757.3098	226988.07
AgPb-2	20-380	21480.018	6.68E-02	-.1934	16537.938	178814.82
	381-800	14250.29	1.58E-04	-.7626	7752.3704	262172.96
AgPb-3	20-331	2826.5476	2.94E-06	-.9813	-1766.092	194735.6
	332-574	9642.3353	2.06E-04	-.7069	3019.6153	260690.3
	575-800	18636.984	9.75E-06	-.5934	10683.064	345850.39
AgPb-5	20-491	6899.1896	5.20E-06	-.8571	1957.1096	210960.2
	492-602	151321.33	3.39E-06	-.3303	144507.25	249609.8
	603-800	20506.291	1.34E-05	-.6716	13692.211	297616.25

Table S2 Comparison of Electrical conductivity and dielectric constant parameters for different materials

Sample	Electrical conductivity σ (S/m)	Dielectric constant	Ref.
polymeric material	0.3×10^1	10	1
Ag	6.3×10^7	15	2
Ag/polyimide	4.2×10^5	400	3
Ag/BaTiO ₃ /PI	3.3×10^6	1500	4
Ni/BaTiO ₃ /polyvinylidene fluoride (PVDF)	3.5×10^6	800	5
Ag/graphene oxide	1.0×10^7	64	6
TiO ₂ -GO-PVDF-HFP	4.1×10^5	18	7
GO/Au-PVDF	7.3×10^7	39	8
GO/Cu-PVDF	6.8×10^7	50	8
PVDF-GO	5.2×10^6	30	9
PbO	1.3×10^2	25	10
SiO ₂	1.0×10^3	3.9	11
Al ₂ O ₃	0.4×10^2	8.5 to 10	12

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