

Table S 1: High band gap value of organic and inorganic based perovskite materials for multi junction solar cell application.

S.no	Material	Structure	E _g (ev)	PCE (%)	Reference Number	year
1	MASnI ₂ Br	Glass/FTO/c-TiO ₂ /m-TiO ₂ /MASnI ₂ Br/Spiro-OMeTAD/Au	1.56	5.48	1	2014
2	CsGel ₃	Glass/FTO/c-TiO ₂ /m-TiO ₂ /CsGel/Spiro-OMeTAD/Au	1.64	0.11	2	2015
3	CsPb _{0.9} Sn _{0.1} I ₂	Glass/c-TiO ₂ /m-TiO ₂ /CsPbSnI ₂ /C	1.79	11.3	3	2017
4	CsSnI ₂ Br	Glass/FTO/c-TiO ₂ /mp-TiO ₂ /CsSnI ₂ Br/PTAA/Au	1.79	3.04	4	2017
5	CsPbI ₂ Br	Glass/FTO/NiOx/CsPbI ₂ Br/ZnO/C60/Ag	1.92	13.3	5	2018
6	CsPbI ₂ Br ₂	Glass/FTO/c-TiO ₂ /CsPbI ₂ Br/Au	2.05	4.7	6	2016
7	MASnBr ₃	Glass/FTO/c-TiO ₂ /m-TiO ₂ /MASnBr/Spiro-OMeTAD/Au	2.15	4.56	1	2014
8	CsPbBr ₃	Glass/FTO/TiO ₂ /CsPbBr/PTAA-TPB-LiTFSI/Au	2.36	6.24	7	2016

References:

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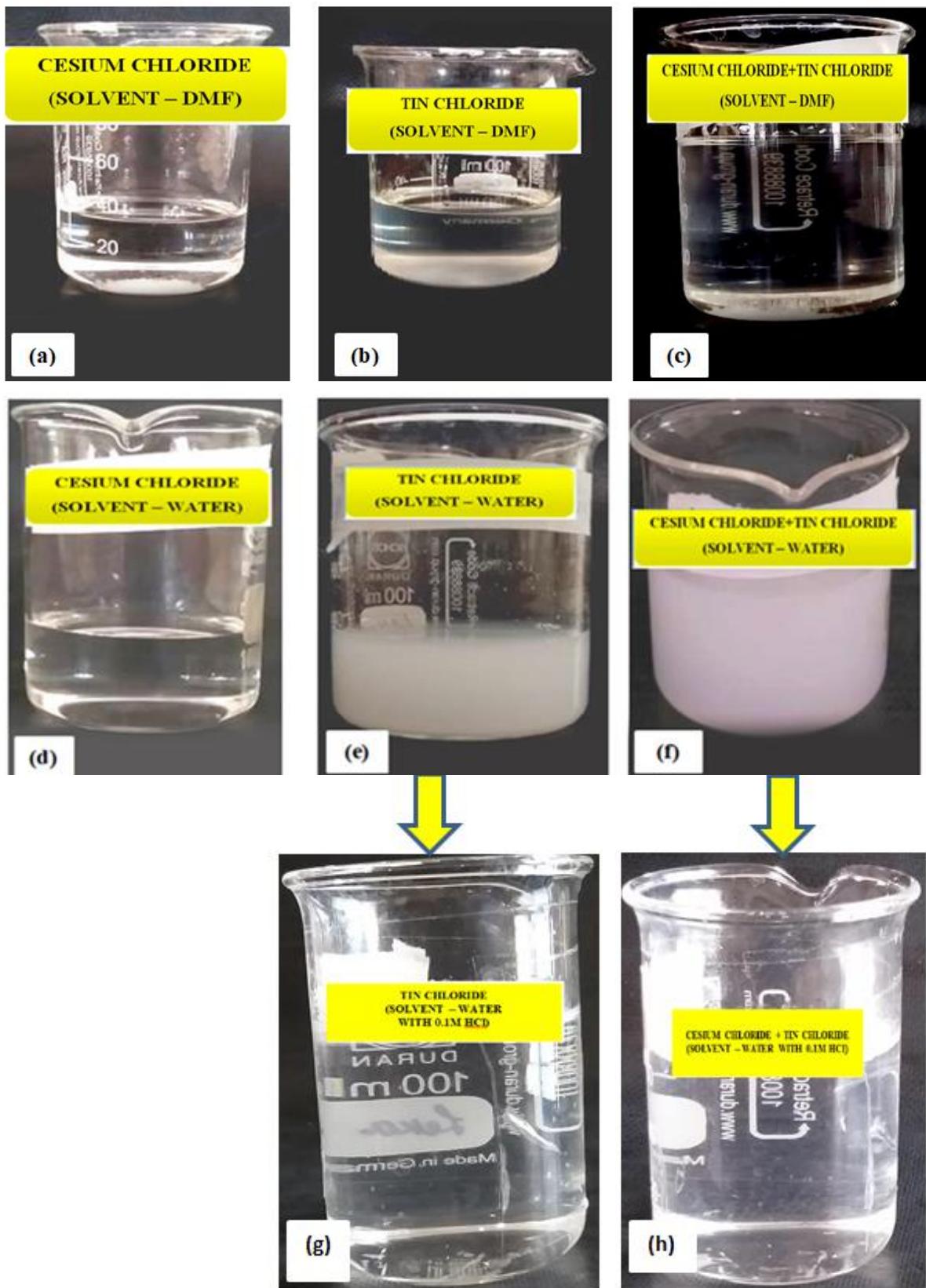


Fig.S1 Solution pictures for (a) Cesium chloride with solvent DMF (b) Tin chloride with solvent DMF (c) Both Cesium and Tin chloride with solvent DMF (d) Cesium chloride with solvent Water (e) Tin chloride with solvent Water (f) Both Cesium and Tin chloride with solvent Water (g) Tin chloride with solvent Water (0.1M HCl) & (h) Both Cesium and Tin chloride with solvent Water (0.1M HCl)

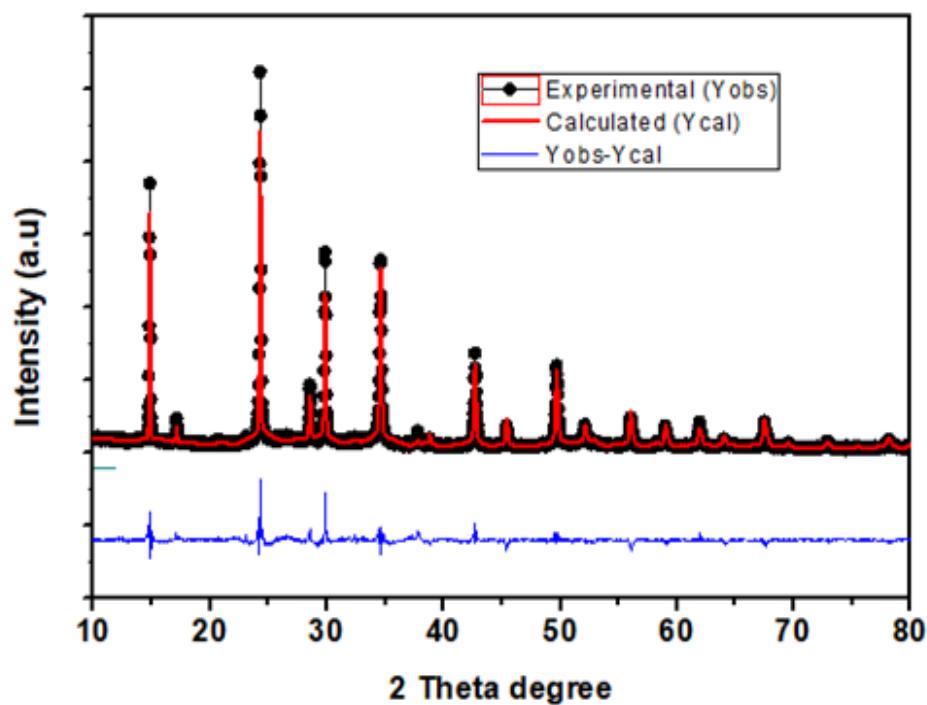


Fig. S2 Reitveld refinement using FullProf Software for Cs_2SnCl_6

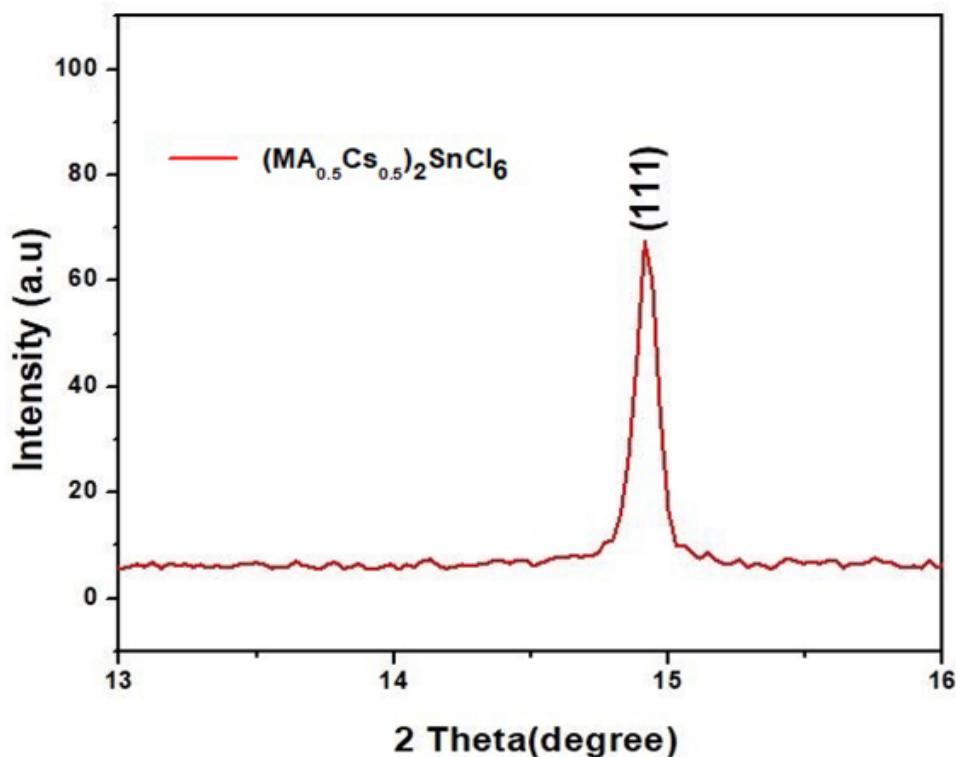


Fig. S3 XRD Pattern obtained for $(\text{MA}_{0.5}\text{Cs}_{0.5})_2\text{SnCl}_6$ at 14.79°

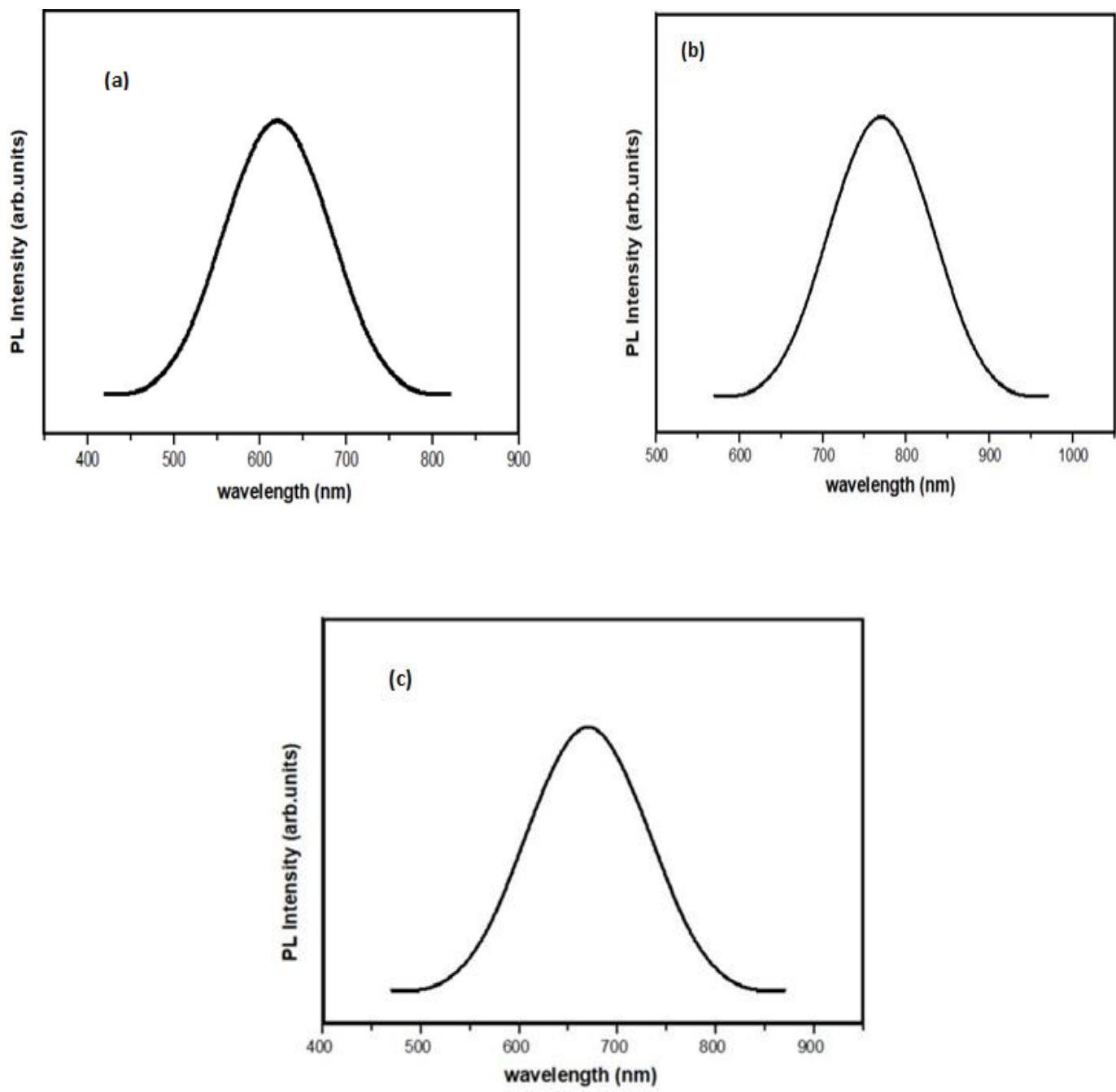


Fig. S4 PL spectrum for (a) Cs_2SnCl_6 (b) MA_2SnCl_6 and (c) $(\text{MA}_{0.5}\text{Cs}_{0.5})_2\text{SnCl}_6$

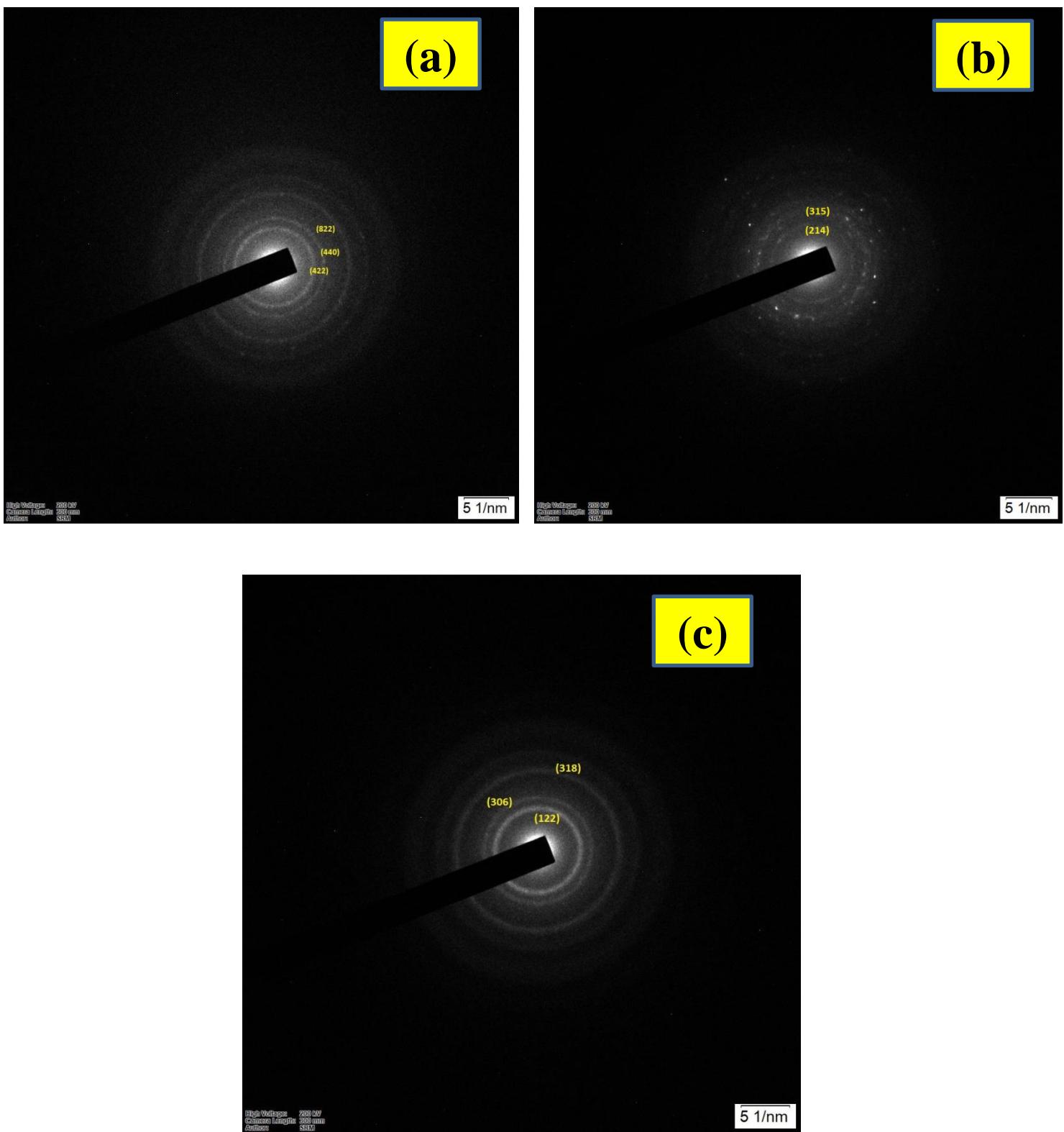


Fig.S5 SAED Pictures for (a) Cs_2SnCl_6 (b) MA_2SnCl_6 and (c) $(\text{MA}_{0.5}\text{Cs}_{0.5})_2\text{SnCl}_6$

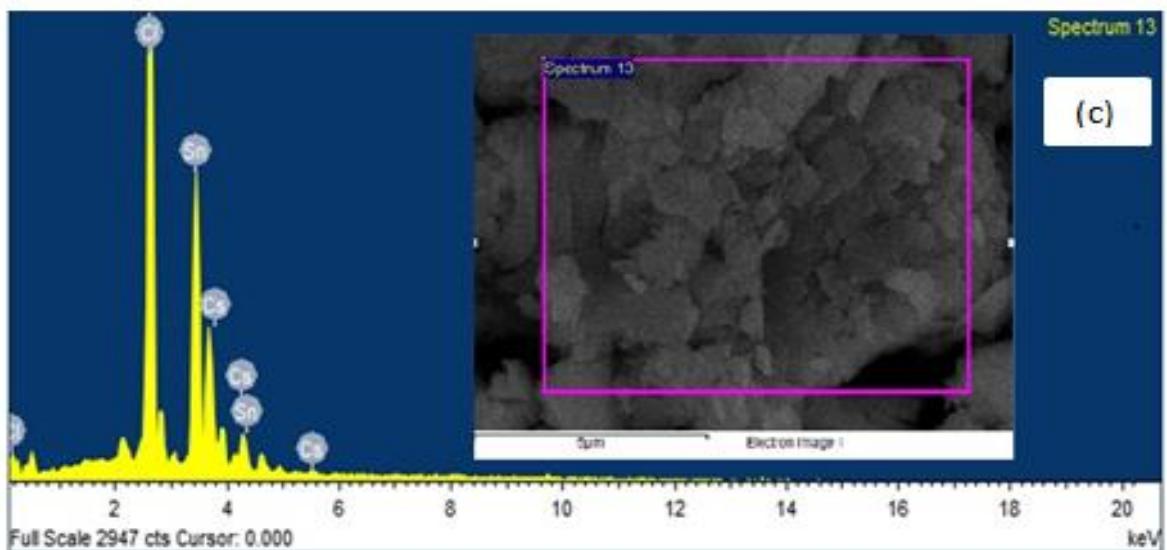


Fig.S6 EDAX analysis for synthesized Cs_2SnCl_6

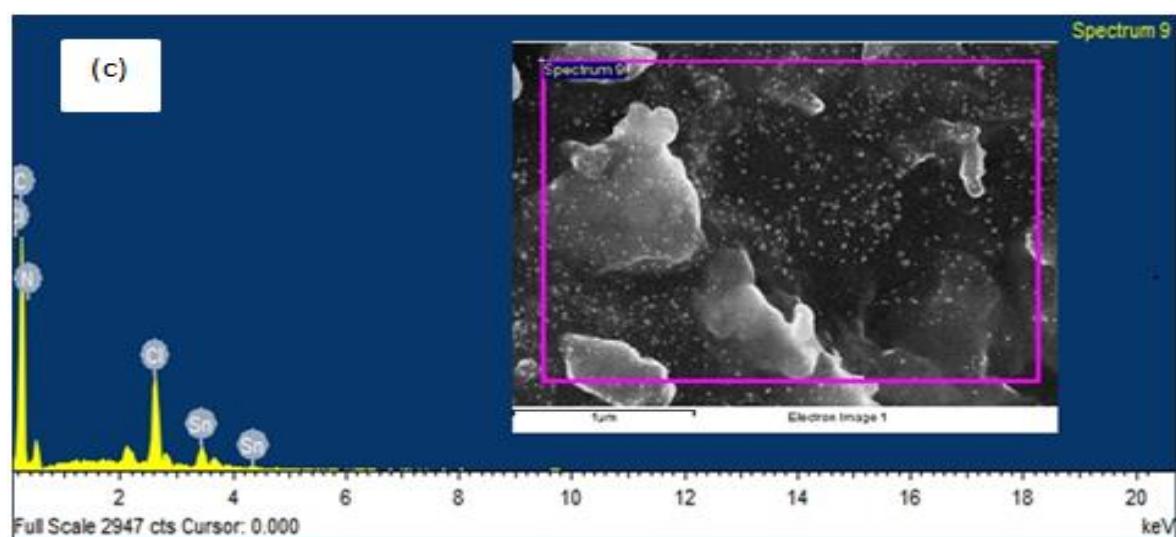


Fig.S7 EDAX analysis for synthesized MA_2SnCl_6

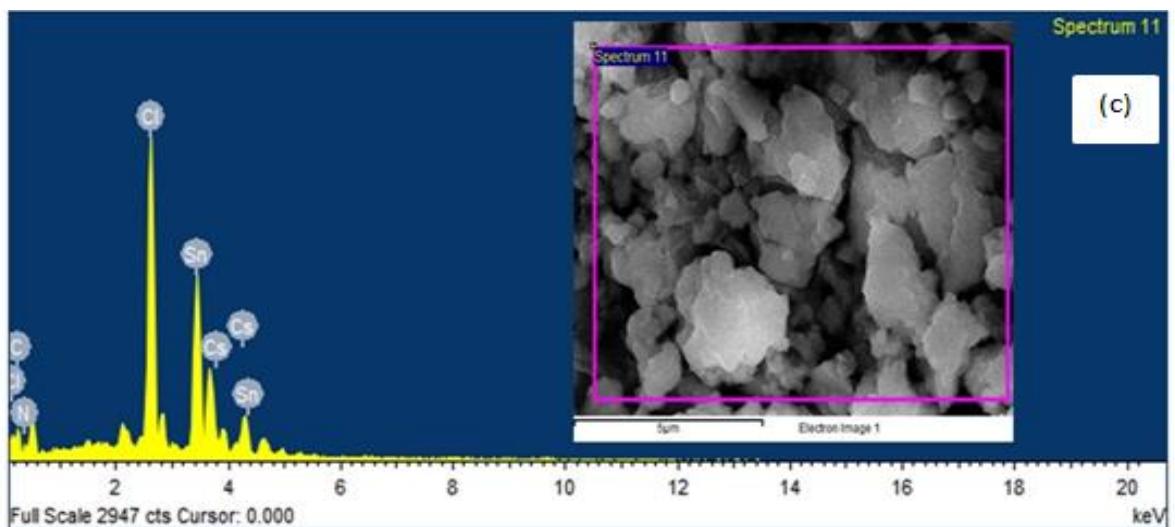


Fig.S8 EDAX analysis for synthesized $(\text{MA}_{0.5}\text{Cs}_{0.5})_2\text{SnCl}_6$.