Supporting Information for:

Water and Methylamine Acetate Synergistic Induced the Growth of Three Primary Color Luminous $MAPbBr_nX_{3-n}$@PbX(OH) Microwires

Chengwei Wang[a][b], Rui Wang[a][b], Yanan Liao[a], Kai Liu[a], Qingyi Zhang[a], Lei Wang[a], Dawei Gu[a],Feifei Qin[c], Feng Chen*[a]

[a] School of Physical and Mathematical Sciences

Nanjing Tech University

Nanjing, 211816, China E-mail: fengchenzql@njtech.edu.cn

[b] College of Food Science and Light Industry

Nanjing Tech University

Nanjing, 211816, China

[c] College of Telecommunications and Information Engineering

Nanjing University of Posts and Telecommunications

Nanjing, 210003, China

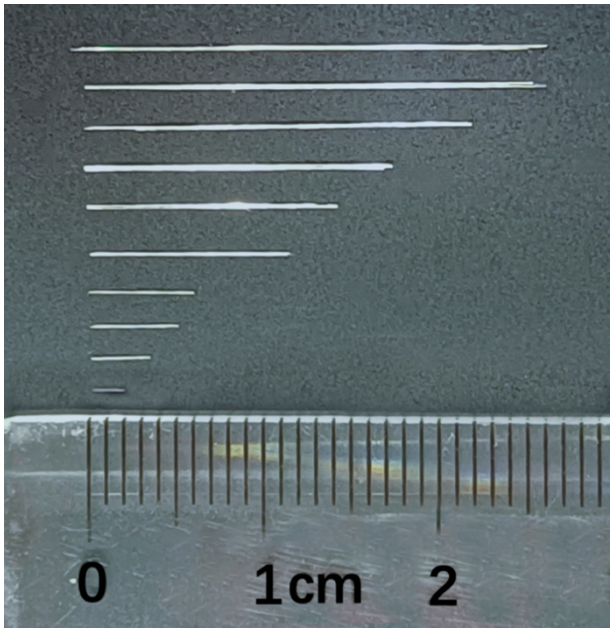

Figure S1. The photographs of the self-assembled $PbBr_2$ MWs with different lengths.

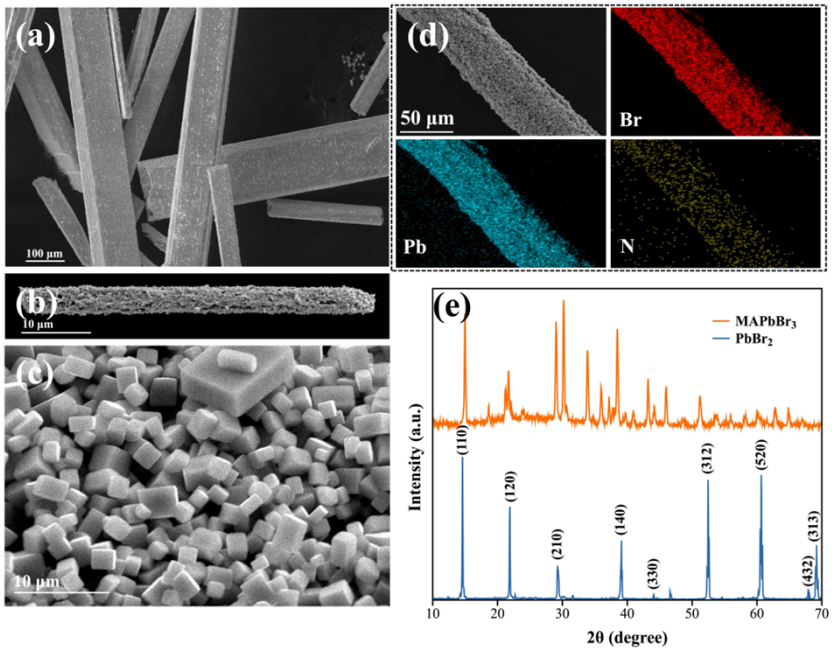

Figure S2. (a)-(d) FE-SEM images and the elemental mapping analysis of $MAPbBr_3$ MWs. (e) XRD patterns of PbBr(OH) MWs and $MAPbBr_3$ MWs.

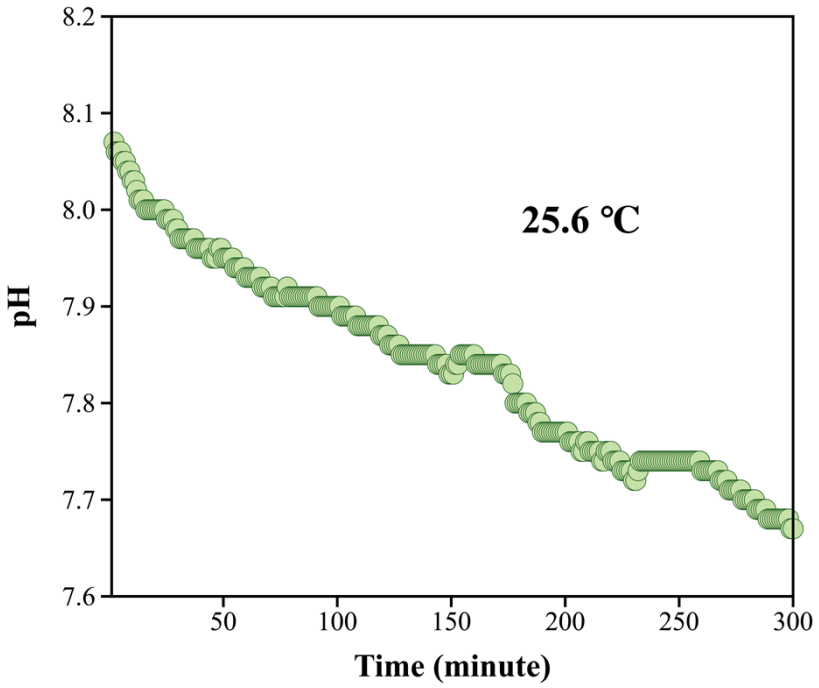

Figure S3. PH value changing curve of the complex solution at 25.6°C for 6 hours.

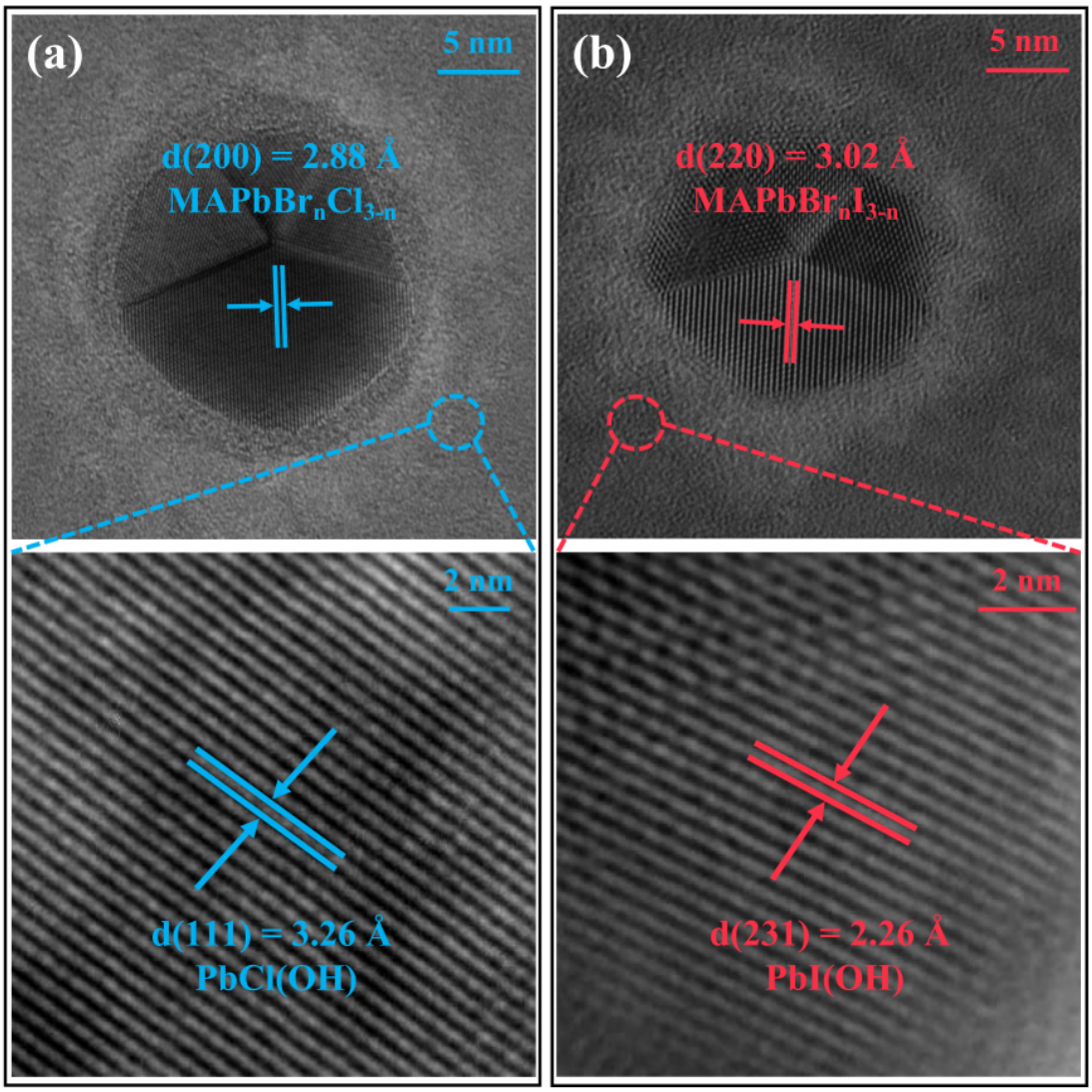

Figure S4. HR-TEM images of $MAPbBr_nCl_{3-n}$@PbCl(OH) and $MAPbBr_nI_{3-n}$@PbI(OH) MWs.

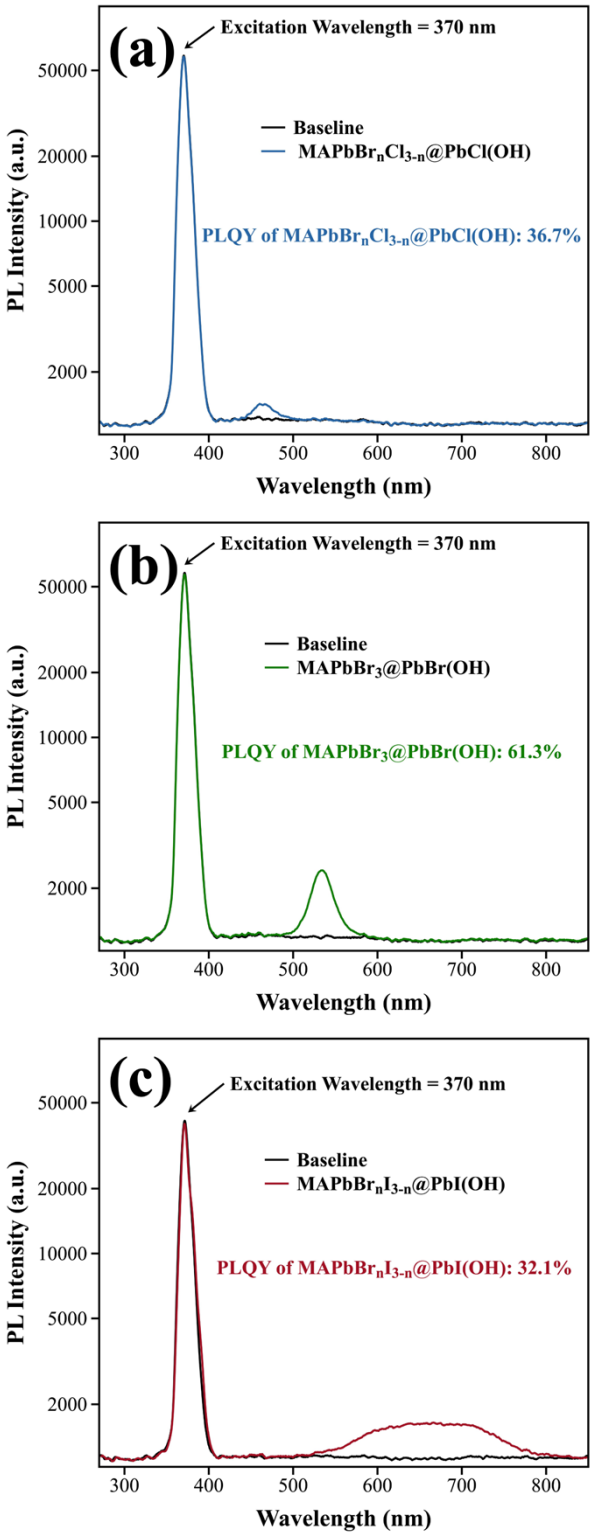

Figure S5. Photoluminescence quantum yield (PLQY) of the three primary color luminous $MAPbBr_nX_{3-n}$@PbX(OH) microwires.

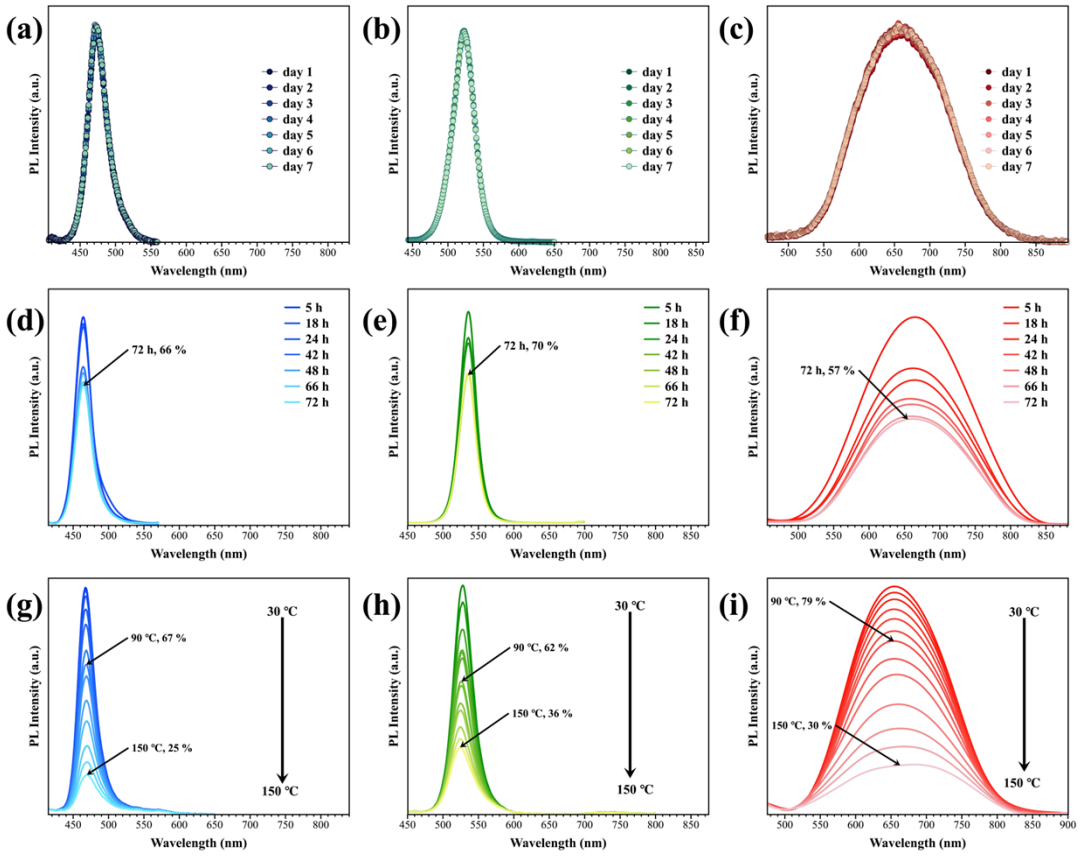

Figure S6. PL spectra of the three primary color luminous microwires during harsh environmental stability test: (a-c) The polar solvent stability study of these three primary color luminous microwires in a mixture of seven polar solvents: H_2O, EtOH, MeOH, DMF, DCM, DMSO, and Acetone for 7 days.(d-e) The stability study of these three primary color luminous microwires upon continuously irradiation with a 365 nm UV lamp (light intensity = 0.27 mW/cm^2). (g-i) The stability study of these three primary color luminous microwires under heating at different temperatures.