

Stability Modification of Dye-sensitized Solar Cells by Ruthenium Dyes Embedded on Eggshell Membranes

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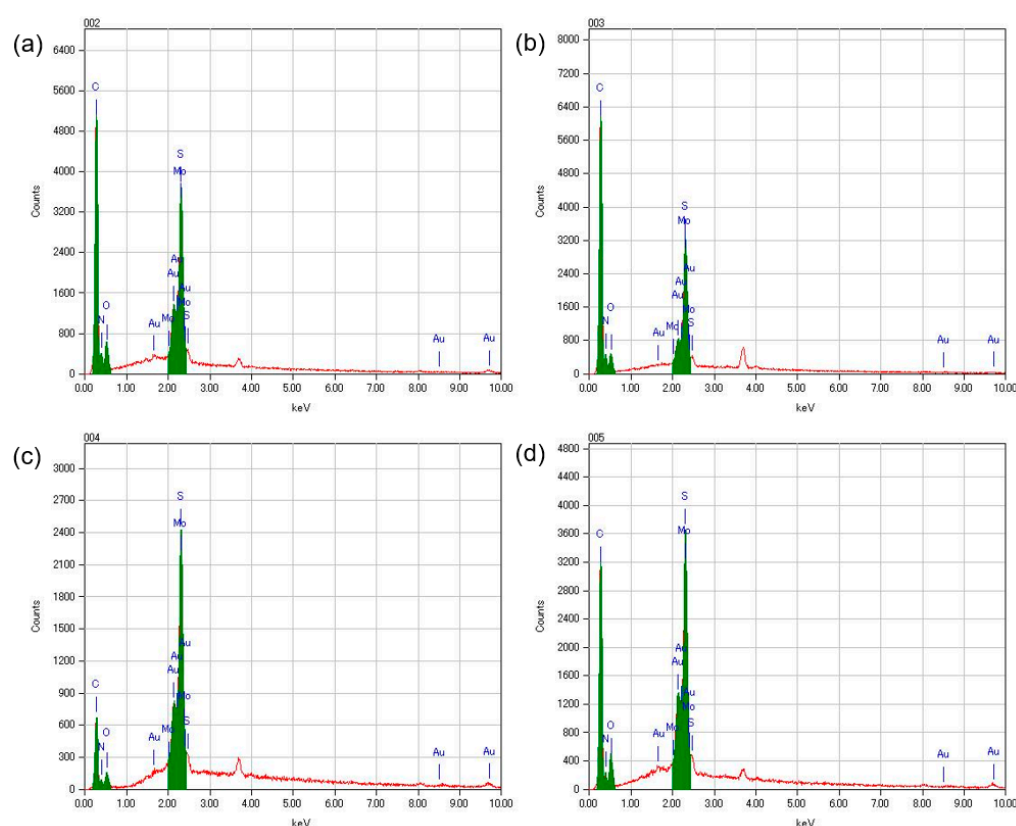


Figure S1. EDX spectra at the position 002 (a), 003 (b), 004 (c), and 005 (d) of ESM.

Table S1. Elemental analysis at the position 002 of ESM.

Element	Energy [keV]	Atomic ratio [%]
C	0.277	72.82
N	0.392	12.96
O	0.525	7.22
S	2.307	5.23
Mo	2.293	0.96
Au	2.121	0.81

Table S2. Elemental analysis at the position 003 of ESM.

Element	Energy [keV]	Atomic ratio [%]
C	0.277	72.10
N	0.392	16.56
O	0.525	6.02
S	2.307	4.26
Mo	2.293	0.67
Au	2.121	0.40

Table S3. Elemental analysis at the position 004 of ESM.

Element	Energy [keV]	Atomic Ratio [%]
C	0.277	67.60
N	0.392	9.00
O	0.525	5.42
S	2.307	13.71
Mo	2.293	2.46
Au	2.121	1.80

Table S4. Elemental analysis at the position 005 of ESM.

Element	Energy [keV]	Atomic Ratio [%]
C	0.277	76.85
N	0.392	6.69
O	0.525	7.18
S	2.307	7.17
Mo	2.293	1.03
Au	2.121	1.07

Table S5. The comparison among the conversion efficiencies of DSSCs.

Dye Metal Oxide	Conversion Efficiency [%]	Reference
[Ru(bpy) ₂ (CN) ₂] ₂ Ru(bpy(COO) ₂) ₂ ²⁻ TiO ₂	7.1-7.9	[1]
N719 TiO ₂	>11	[2]
N719 TiO ₂ -bamboo-charcoal-powder	5.4	[3]
Anthocyanin dye TiO ₂ -WO ₃	1.8	[4]
N719-adsorbed ESM TiO ₂	0.008	This work

References

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