

Table S1. Optical properties of recently reported VO₂-based thermochromic films.

Sample	$T_{lum,lt}(\%)$	$T_{lum,ht}(\%)$	$T_{sol,lt}(\%)$	$T_{sol,ht}(\%)$	$\Delta T_{sol}(\%)$	Reference
Single-thermally driven VO₂-based smart coatings						
VO ₂ :Si(17%)	36.1	33.3	39.7	30.5	9.2	1
Mg-doped VO ₂ nanoparticle	54.2	51.8	58.0	47.4	10.6	2
F-doped VO ₂ nanoparticles	48.7	45.9	45.9	35.1	10.7	3
SiO ₂ /VO ₂	27.6	26.3	25.1	18.8	6.3	4
TiO ₂ /VO ₂ /TiO ₂	42.5	39.8	-	-	6.9	5
TiO ₂ /VO ₂	32.4	31.3	37.2	28.6	8.6	6
TiO ₂ /VO ₂ /TiO ₂	30.1	27.8	33.8	23.6	10.2	6
Double-sided VO ₂ film	39.8	41.8	50.2	40.0	10.2	7
VO ₂ /SiO ₂ /TiO ₂	17.8	18.2	28.8	13.5	15.3	8
TiO ₂ /VO ₂ /TiO ₂ /VO ₂ /TiO ₂	45.0	42.3	52.1	40.0	12.1	9
Spinodal TiO ₂ -VO ₂ Film	22.0	20.9	33.2	20.1	13.1	10
Cr ₂ O ₃ /VO ₂	46.0	36.9	41.6	29.4	12.2	11
Cr ₂ O ₃ /VO ₂ /SiO ₂	54.0	42.2	52.4	36.3	16.1	12
SiNx/NiCrOx/SiNx/VOx/SiNx/NiCr Ox/SiNx	32.7%	-	-	-	18.02	13
Nanoporous VO ₂ Films	43.3	39.9	42.9	28.8	14.1	14
VO ₂ @SiO ₂ nanoparticles	36.0	40.3	50.3	41.9	8.4	15
SiO ₂ /VO ₂ core/shell structure	55.3	54.2	58.7	51.2	7.5	16
VO ₂ @SiO ₂ nanorods	37.07	34.31	50.36	31.82	18.54	17
VO ₂ /BaSO ₄ composites	42.2	43.5	51.2	38.9	12.4	18
VO ₂ /CoFe ₂ O ₄ composites	21.53	21.40	35.27	18.66	16.6	19
VO ₂ /Si-Al gel composite	63.7	54.4	61.9	49.9	12.0	20
Double-thermally driven VO₂-based smart coatings						
VO ₂ -PNIPAm	82.1	43.2	38.9	62.6	34.7	21
VO ₂ -Ni-Cl-ionic liquid	52.08	29.26	58.11	27.35	30.76	22
VO ₂ -Ni-Br-ionic liquid	65.9	55.3	70.1	43.1	27.0	23
VO ₂ -Co ^{II} -Br-TMP	62.73	55.77	66.13	45.32	20.82	24
VO ₂ -Ni ^{II} -I-TMP	61.3	36.2	61.8	34.5	27.3	25
VO ₂ -NLETS	65.16	52.54	69.09	44.75	24.34	26
Dual-Mode Driven VO₂-based Smart Coatings						
W-VO ₂ +Liquid crystal	55.35	-	-	-	40.9	27
Gate-controlled VO ₂	-	-	-	-	26.5	28
Elastomer + VO ₂ nanoparticles	35.2	17.6	-	-	37.7	29

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