Table S1 Contents of major chemical components in tea leaves after foliar spraying of nano-Se (%)

Treatments	CK	D1	D2	D3	D4
Total polyphenols	24.33±0.43a	22.44±0.30c	22.51±0.27c	21.97±0.35d	22.86±0.24b
Amino acid	2.39±0.07b	2.68±0.25a	2.58±0.26a	2.58±0.18a	2.28±0.01c
Theanine	1.15±0.07c	1.40±0.10a	1.22±0.12b	1.35±0.07a	1.18±0.01bc
TP/AA	10.18a	8.39b	8.74b	8.53b	10.03a

Data were analysed by one-way ANOVA.

Table S2 Contents of catechins in tea leaves after foliar spraying of nano-Se (mg/g)

	CK	D1	D2	D3	D4
EGC	24.95±0.87b	22.78±0.70c	23.51±0.17bc	26.87±0.31a	26.91±1.07a
C	8.99±0.14ab	8.26±0.25c	8.66±0.24bc	8.91±0.29ab	9.23±0.17a
EC	5.45±0.05bc	5.05±0.11d	5.28±0.03c	5.52±0.09ab	5.68±0.15a
EGCG	62.25±2.41a	53.57±1.49b	57.30±0.35b	62.08±1.20a	65.55±2.45a
GCG	22.3±0.79ab	18.71±0.98d	19.97±0.52cd	22.01±1.42bc	24.37±0.77a
ECG	13.33±0.17a	10.66±0.36c	12.41±0.24b	12.45±0.09b	13.74±0.65a
Total catechins	137.30±4.08b	119.03±3.41d	127.12±0.99c	137.86±3.18b	145.48±4.09a
Caffeine	39.20±0.19a	36.41±0.57b	37.06±0.05b	36.28±0.41b	37.19±0.75b

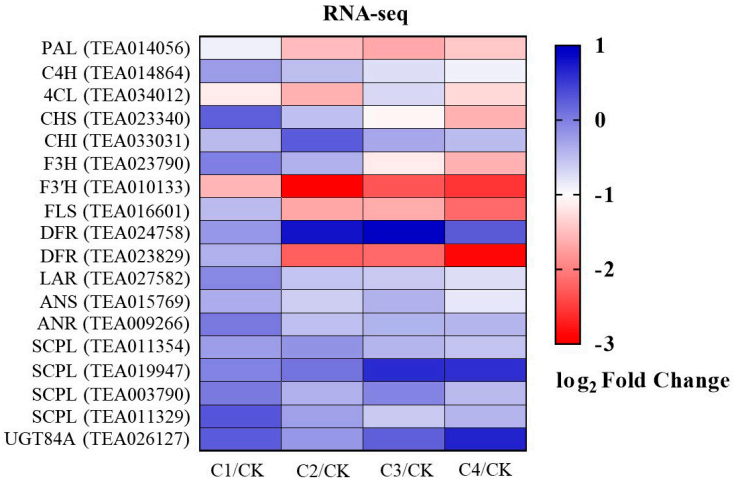
Data were analysed by one-way ANOVA.

Table S3. List of primers used in this study

Primer names	Primer sequence (5'-3')	Usage
CsLAR-F	GTGCGGCGATTGATAGAA	qRT-PCR
CsLAR-R	GCAGGATGGTCGGAAATG	qRT-PCR
CsUGT84A-F	GATCAAGTGACCGATGCC	qRT-PCR
CsUGT84A-R	ATACCTAAACTTCTCCTCCTCA	qRT-PCR
CsWRKY70-F	AAGAATCCAAGAGGACCCA	qRT-PCR
CsWRKY70-R	CGAAGCGAATTGTGAACG	qRT-PCR
β-actin-F	GCCATCTTTGATTGGAATGG	qRT-PCR
β-actin-R	GGTGCCACAACCTTGATCTT	qRT-PCR
CsLAR-pro-F	TCACCGTGTGGCTCCG	Promoter clone
CsLAR-pro-R	TGCGGACACAGATTCCAACA	Promoter clone
CsUGT84A-pro-F	CTCCGACGATCAAGTTAGCACA	Promoter clone
CsUGT84A-pro-R	GAAGGAGACTAGGAAGACATGGAC	Promoter clone
CsWRKY70-F	ATGGGTGGTGATGATACACTACTTTC	Full-length gene clone
CsWRKY70-R	CTAAATGAACTCACTCTCATCAAAATGG	Full-length gene clone

CsWRKY70-GFP-F	caaattcgcgaccggt ATGGGTGGTGATGATACACTACTTTC	Subcellular localization
CsWRKY70-GFP-R	tgctagtcataccggt AATGAACTCACTCTCATCAAAATGG	Subcellular localization
CsWRKY70-BD-F	gatggaggccgaattc ATGGGTGGTGATGATACACTACTTTC	Transcriptional activity analysis
CsWRKY70-BD-R	gccgctgcaggtcgacg CTAAATGAACTCACTCTCATCAAAATGG	Transcriptional activity analysis
CsWRKY70-pBD-F	tcgccgaccggtaggcct ATGGGTGGTGATGATACACTACTTTC	Transcriptional activity analysis
CsWRKY70-pBD-R	aaccagagttaaaggcct AATGAACTCACTCTCATCAAAATGG	Transcriptional activity analysis
CsWRKY70-N-F	ATGGAAGATGGTCATGCATGGA	Gene clone
CsWRKY70-N-R	TCAGCATGTATGGTGGCC	Gene clone
GST-*CsWRKY70*-N-F	Ggttccgcgtggatcc ATGGAAGATGGTCATGCATGGA	Protein expression and purification
GST-*CsWRKY70*-N-R	Agtcacgatgcggccgc TCAGCATGTATGGTGGCC	Protein expression and purification
CsWRKY70-pEAQ-F	caaattcgcgaccggt ATGGGTGGTGATGATACACTACTTTC	Transient expression
CsWRKY70-pEAQ-R	agttaaaggcctcgag AATGAACTCACTCTCATCAAAATGG	Transient expression
CsLAR-0800-F	Tatagggcgaattgggtacc TCACCGTGTGGCTCCG	Transient expression
CsLAR-0800-R	Ttggcgtcttccatgg TGCGGACACAGATTCCAACA	Transient expression
CsUGT84A-0800-F	tatagggcgaattgggtacc CTCCGACGATCAAGTTAGCACA	Transient expression
CsUGT84A-0800-R	ttggcgtcttccatgg GAAGGAGACTAGGAAGACATGGAC	Transient expression
CsLAR-Probe-F	GAGCTTTTTGATTTTTTTGACTTTTTGTAA GAGAAAGAATGTAATGATTATG	Electrophoretic mobility assays (EMSA)
CsLAR-Probe-R	CATAATCATTACATTCTTTCTCTTACAAAA AGTCAAAAAAATCAAAAAGCTC	Electrophoretic mobility assays (EMSA)
CsUGT84A-Probe-F	CTGGAGATTGGTTGTGCCGGTCAGCCAAC AACCTTCTCGGCCACGTTCCAA	Electrophoretic mobility assays (EMSA)
CsUGT84A-Probe-R	TTGGAACGTGGCCGAGAAGGTTGTTGGC TGACCGGCACAACCAATCTCCAG	Electrophoretic mobility assays (EMSA)

Figure S1. Gene expression levels of differentially expressed catechin biosynthesis-related genes from transcriptome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C4H (TEA014864)
4CL (TEA034012)
CHS (TEA023340)
CHI (TEA033031)
F3H (TEA023790)
F3′H (TEA010133)
FLS (TEA016601)
DFR (TEA024758)
DFR (TEA023829)
LAR (TEA027582)
ANS (TEA015769)
ANR (TEA009266)
SCPL (TEA011354)
SCPL (TEA019947)
SCPL (TEA003790)
SCPL (TEA011329)
UGT84A (TEA026127)
C1/CK
C2/CK
C3/CK
C4/CK
1
0
-1
-2
-3
log2 Fold Change