

## TMV nanorods with programmed longitudinal domains of differently addressable coat proteins<sup>†</sup>

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### <sup>†</sup>LIST OF SUPPLEMENTARY INFORMATION

This Electronic Supplementary Information (ESI) contains:

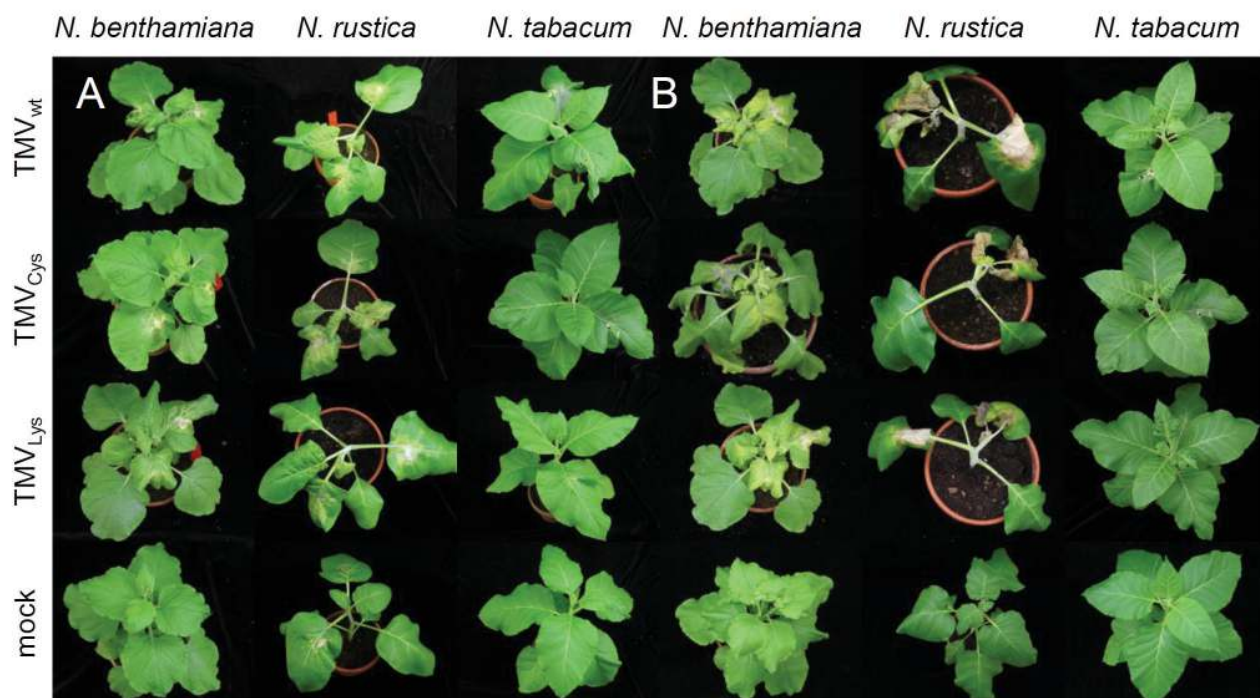
#### 1. Two Supplementary Figures [pp. S1-2]

**Supplementary Figure S1:** Phenotype of different *Nicotiana* plant species systemically infected with TMV<sub>wt</sub>, TMV<sub>Cys</sub>, or TMV<sub>Lys</sub> at 9 and 15 days post inoculation. [p. S1]

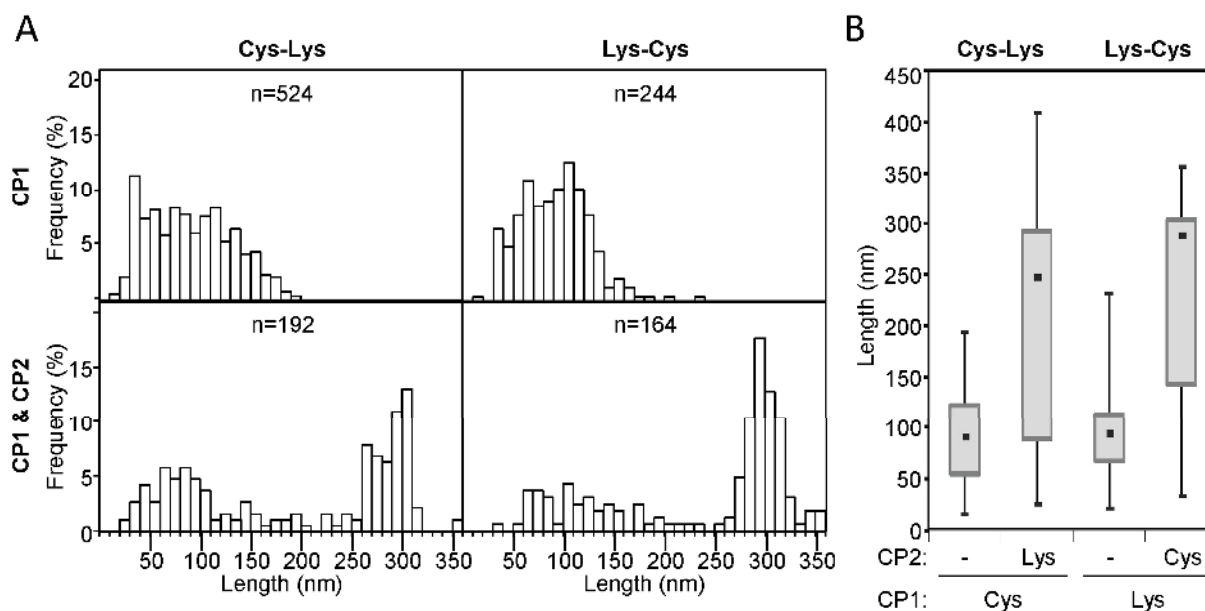
**Supplementary Figure S2:** Length distributions of partially and completely *in vitro* assembled VLP rods using TMV<sub>wt</sub> RNA as a template. [p. S2]

#### 2. Supplementary Table [p. S2]

**Table S1:** Sequences of primers used for site-specific mutagenesis of the TMV CP ORF and for sequencing.



**Figure S1:** *N. benthamiana*, *N. rustica* or *N. tabacum* cv. 'Samsun' nn plants inoculated with wt TMV<sub>wt</sub>, TMV<sub>Cys</sub>, TMV<sub>Lys</sub> particles or buffer (mock), respectively. Pictures were taken at 9 (A) or 15 dpi (B).



**Figure S2:** Length distributions of *in vitro* assembled TMV-like rods using TMV<sub>wt</sub> RNA as a template, with adjacent domains of different CP species after completion as described in Figures 3 and 4 in the main article. The numbers of particles (n) examined of each sample are indicated in the histograms (A). The median values (black squares), upper and lower quartiles (box), and the maximum and minimum values (bars) are summarized in a box plot (B).

**Table S1:** Sequences of primers used for site-specific mutagenesis of the TMV CP ORF by overlap extension PCR, and for sequencing. Nucleotides inserting mutations are bold and underlined.

Primer	Sequence (5'-3')
F1	CCAACCTCGAGGATTACAAACGTGAGAGACGGAGG
R1	CCAACCTCGAGCGCGATCCAAGACACAACCCTTCG
RCys	CTGAGATGGAGTAGTGATAC <u><b>A</b></u> ATAAG
FCys	TATGTCTTAT <u><b>T</b></u> GTATCACTACTCCATC
RLys	TCTTGACTAGCTCA <u><b>CT</b></u> TTGCAGGA
FLys	CCTCTAGTCCTGCAA <u><b>AG</b></u> TGAGCTAG
CPF	CCGCTTTCTCTGGAGTTTGTGTCG
CPR	CGTGCCTGCGGATGTATATGAACC
INTF	AATCGATGATGATTCGGAGG
INTR	AACACTATGCGTTATCGTACG