



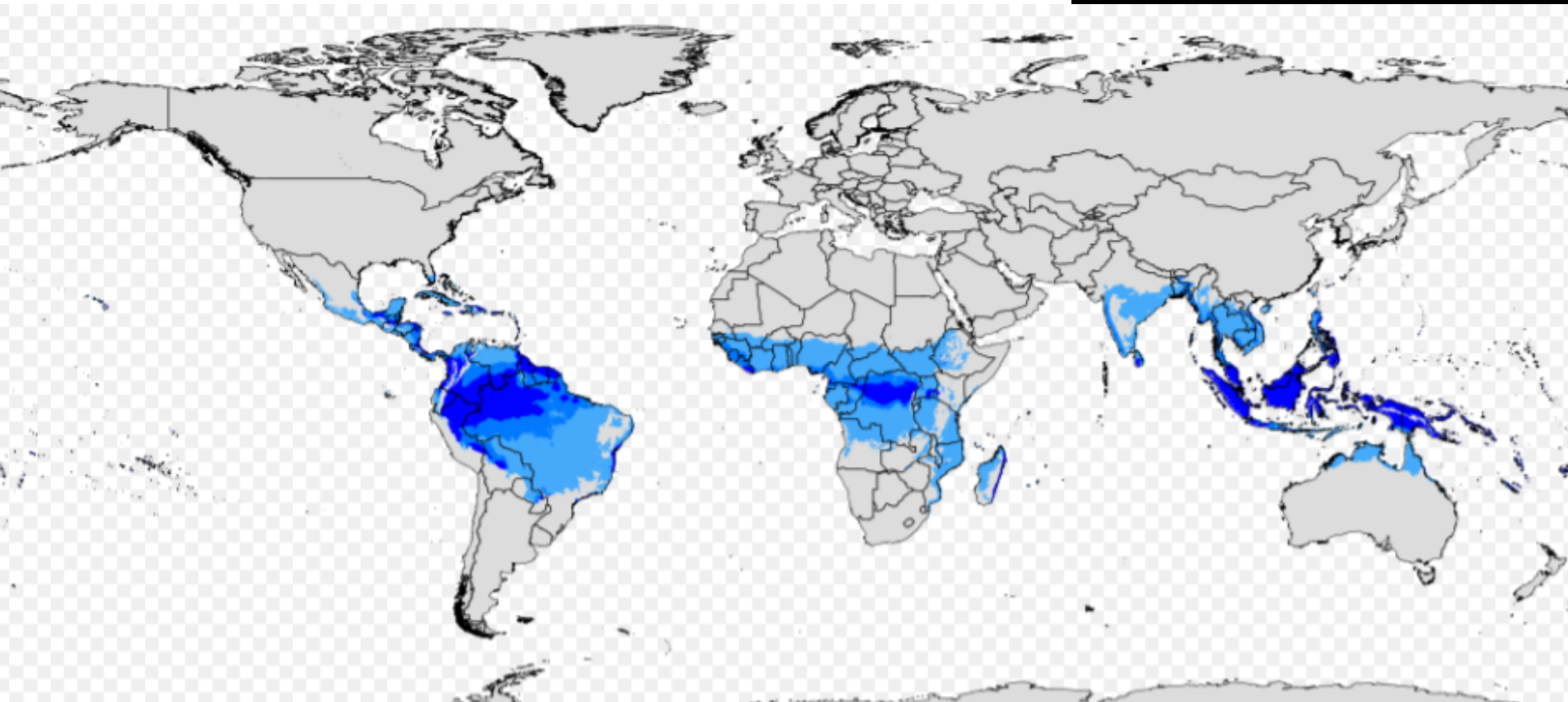
MORPHO PELEIDES

MP820 - CONCEPTION ARCHITECTURALE NUMÉRIQUE

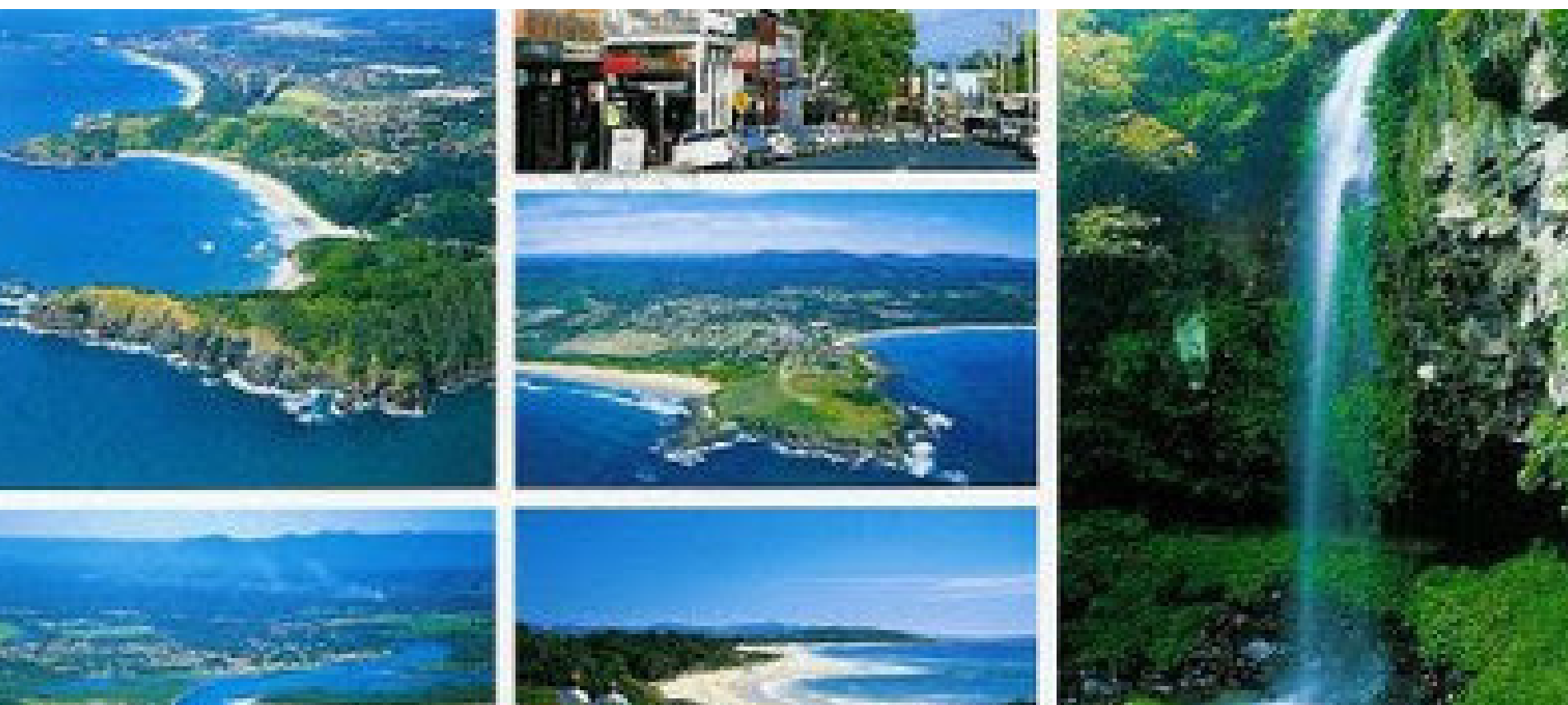
PROF.: N.HEIL/F.GUENA / E.LOCICERO / J.SILVESTRE

ETUDIANT: SARAH PINHEIRO BARROSO

CLIMAT TROPICAL

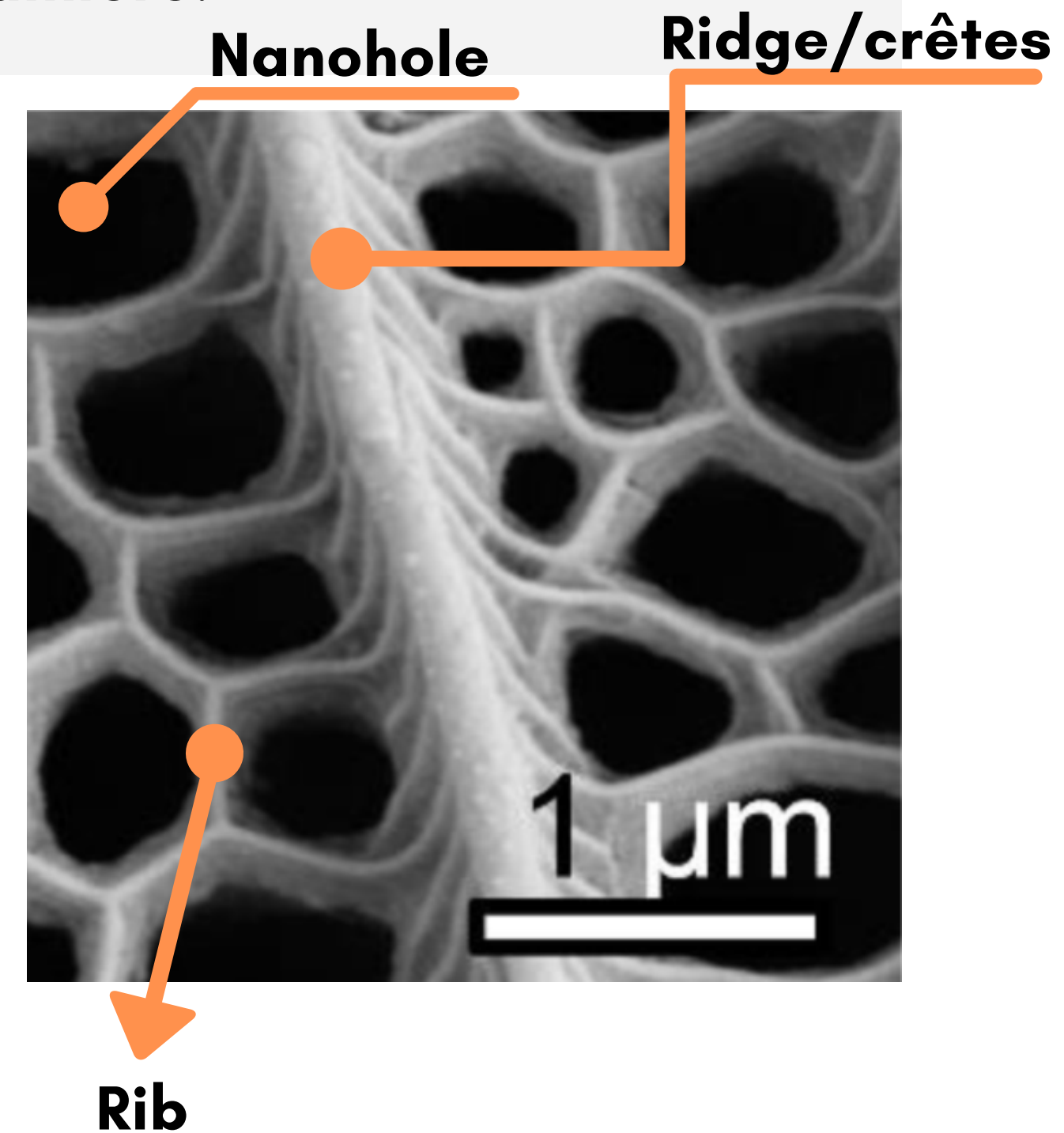
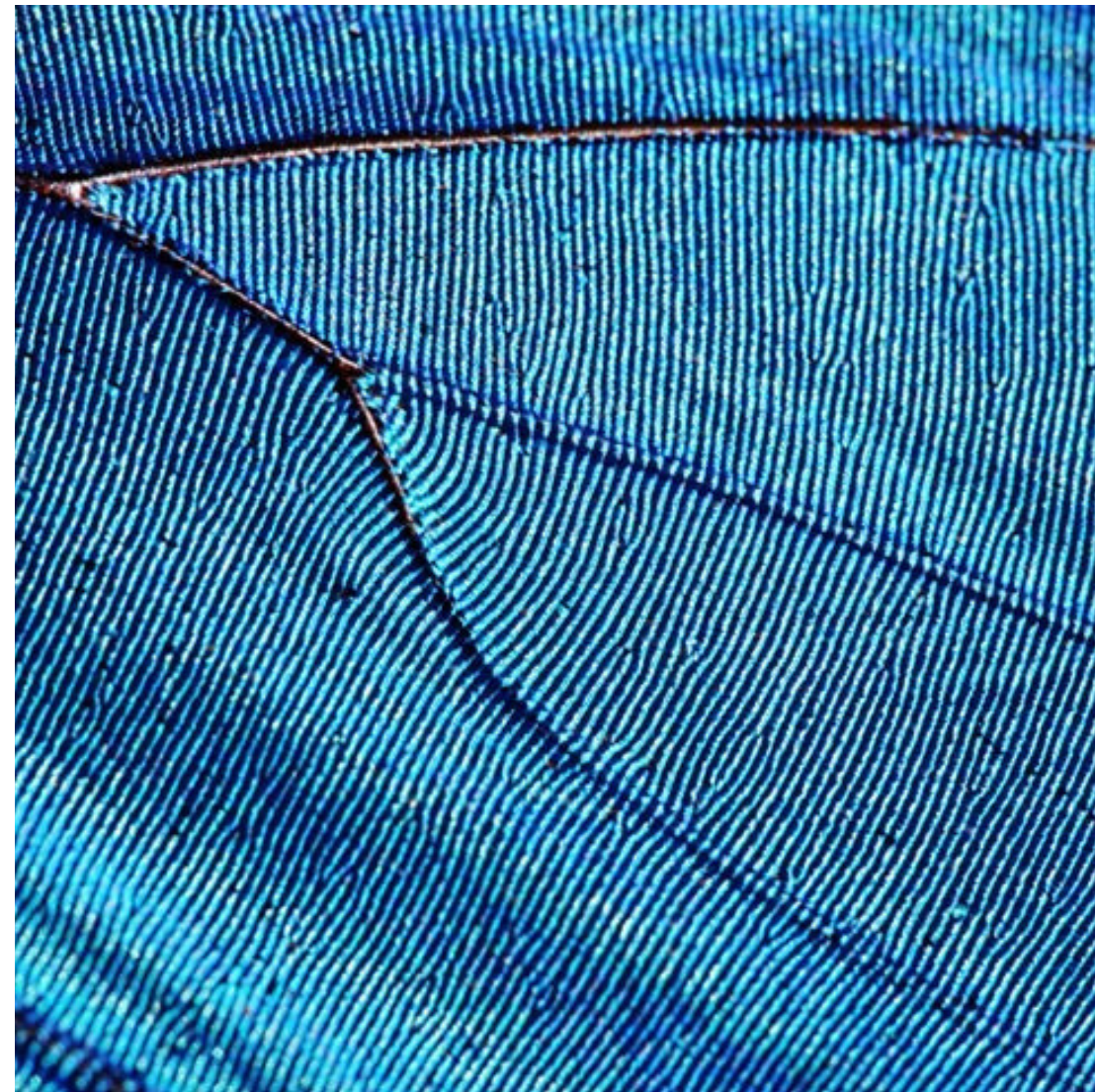


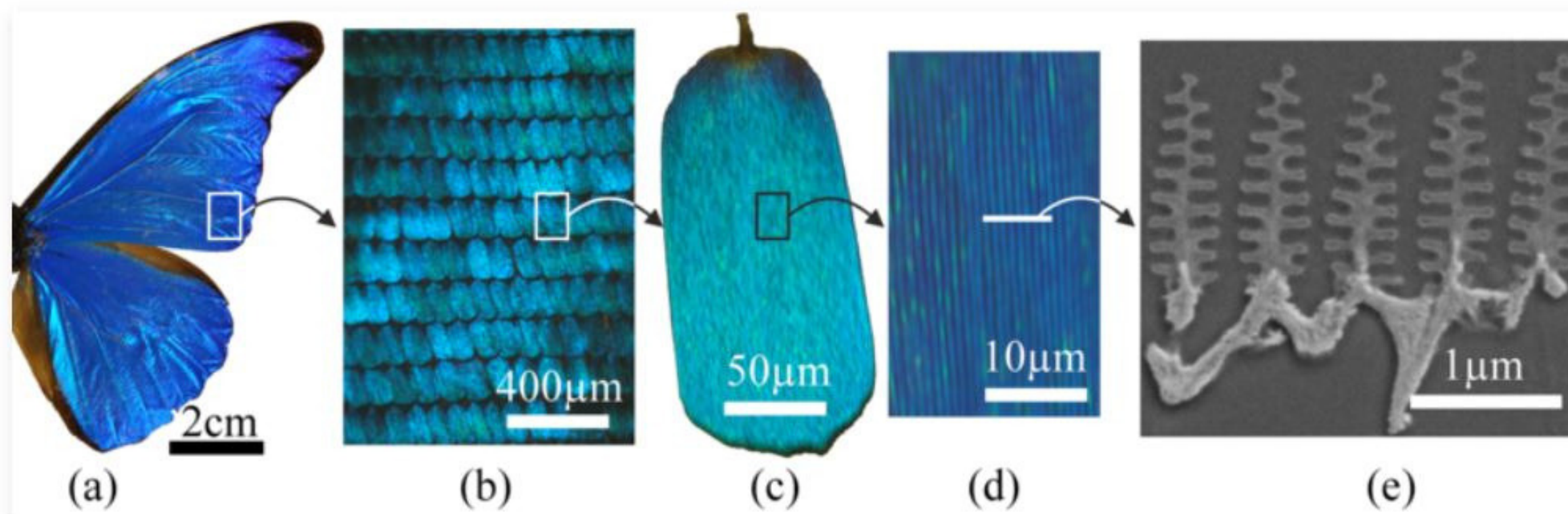
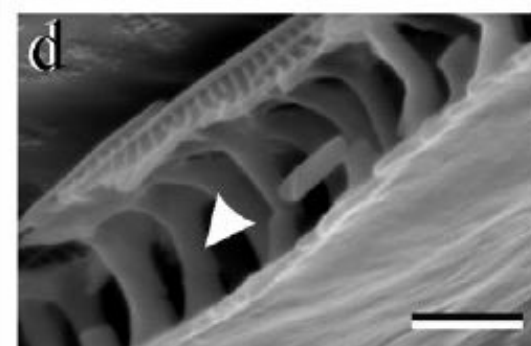
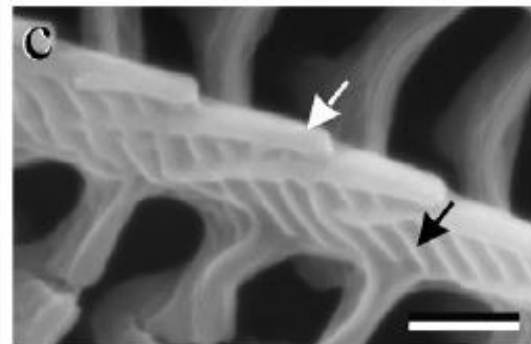
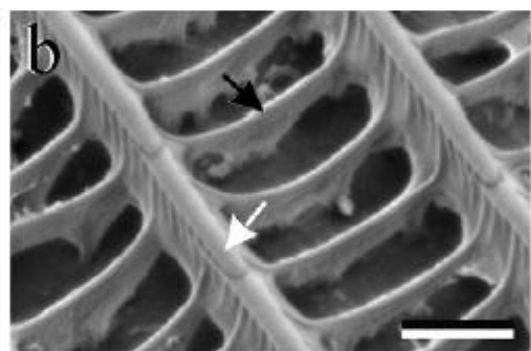
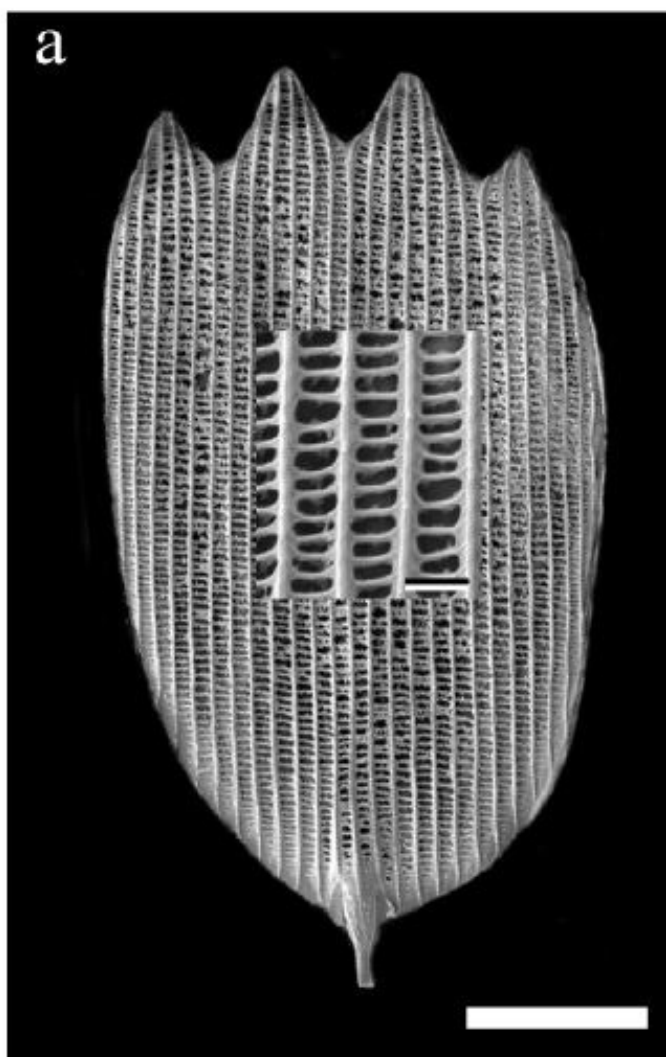
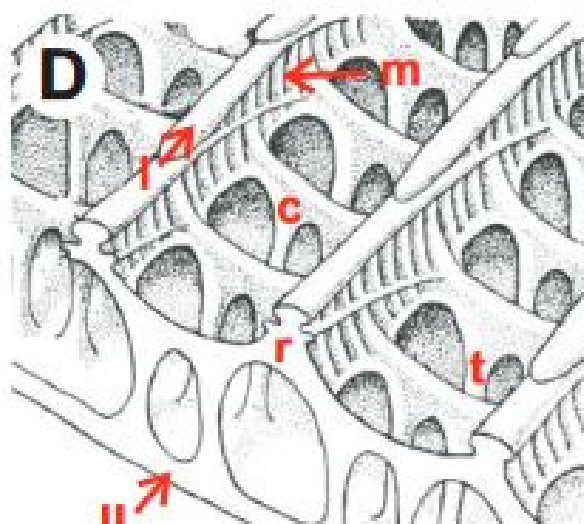
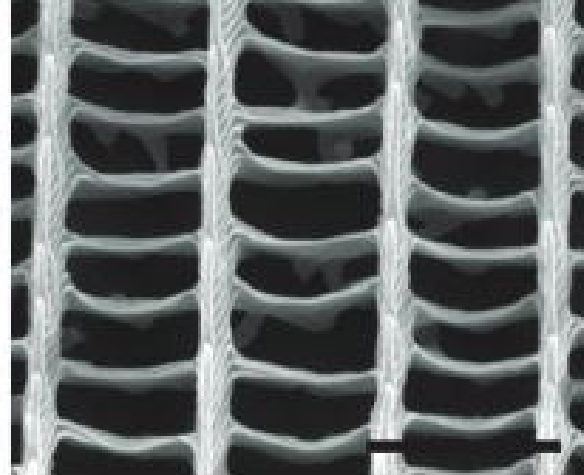
- Présent entre **les tropiques**;
- La température moyenne mensuelle ne descend pas **en dessous de 18 °C (64,4 °F) tout au long de l'année**;
- Existe une **saison sèche** (faibles températures, précipitations quasiment nulles) et une **saison humide** (hautes températures, très fortes précipitations);
- Un climat **non aride**.

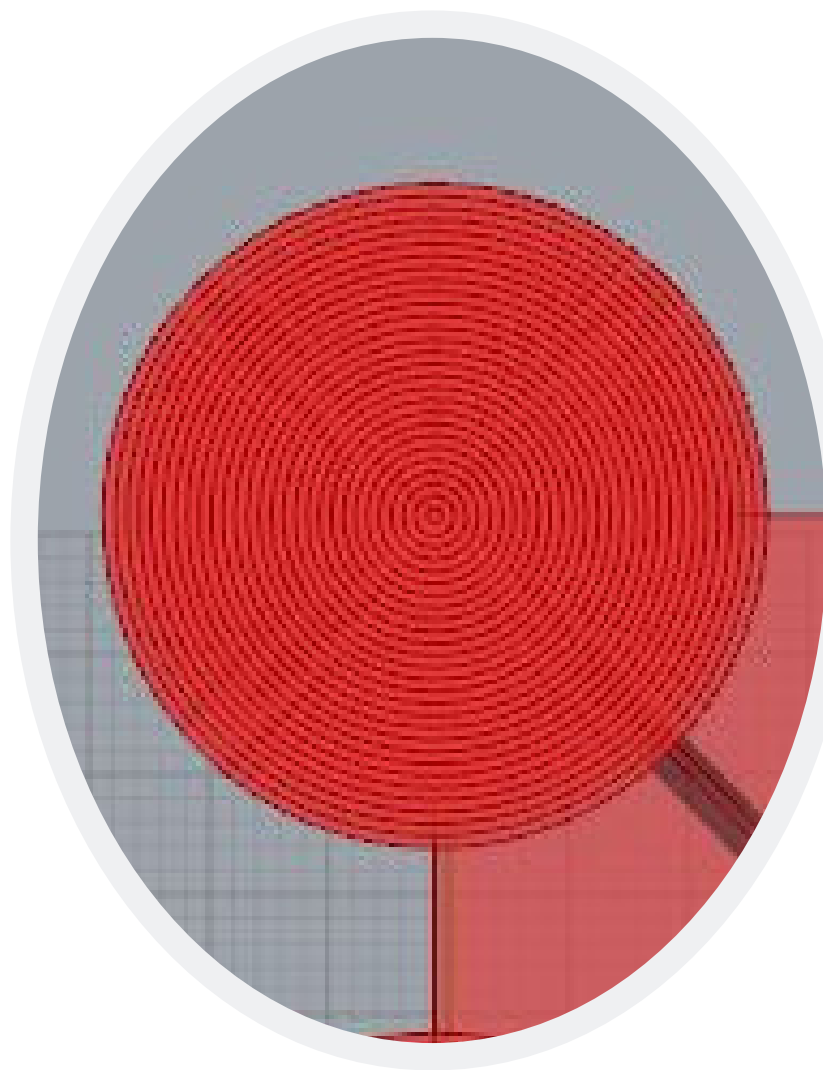
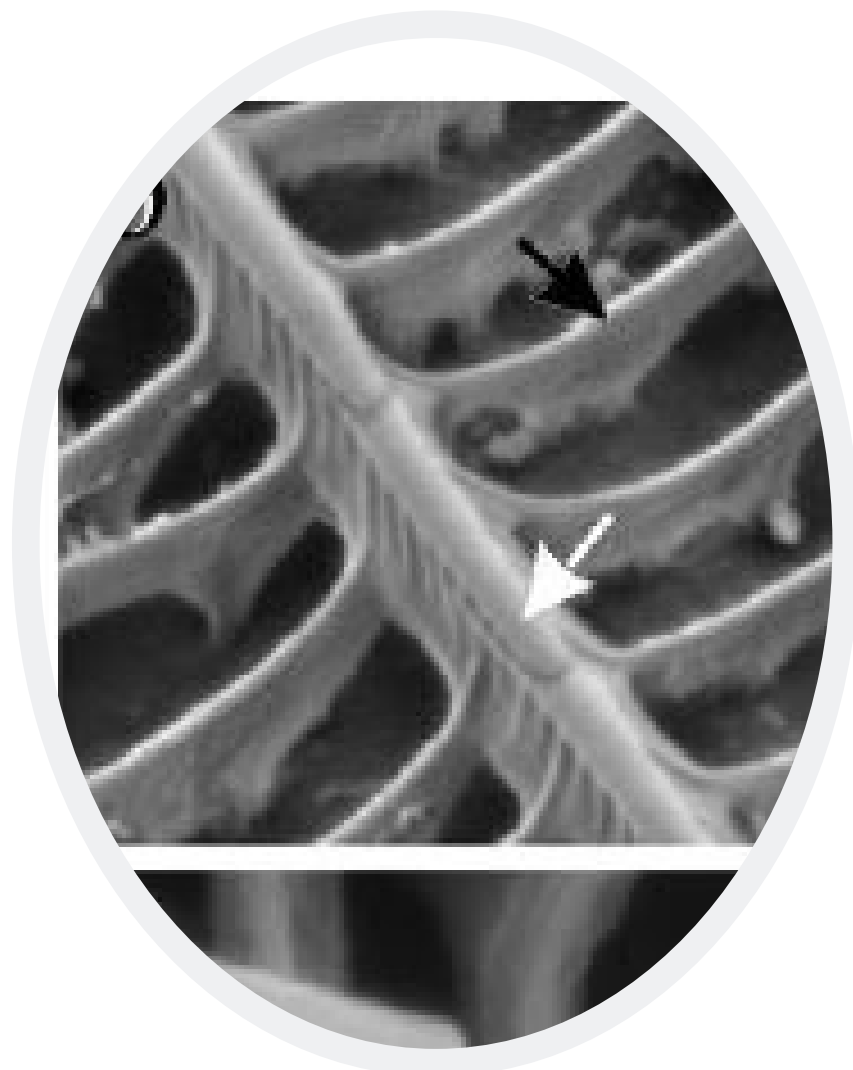
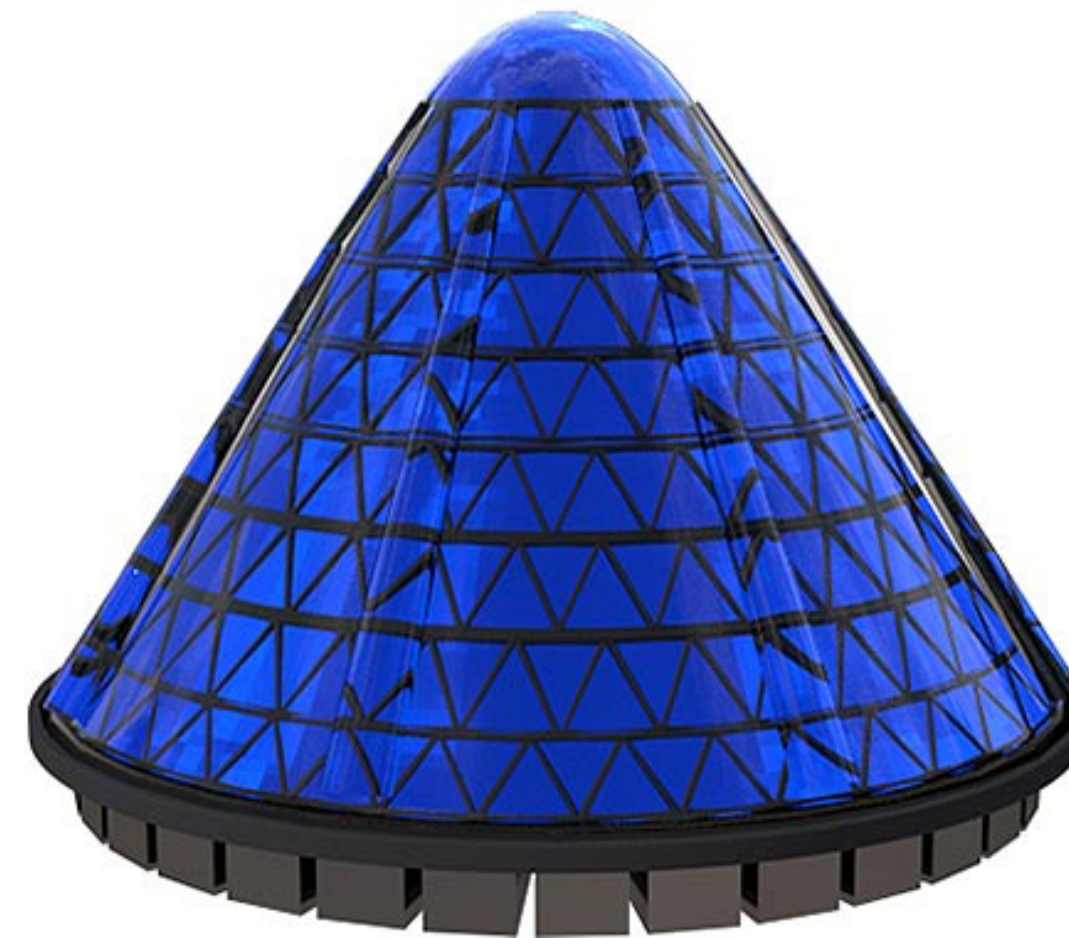
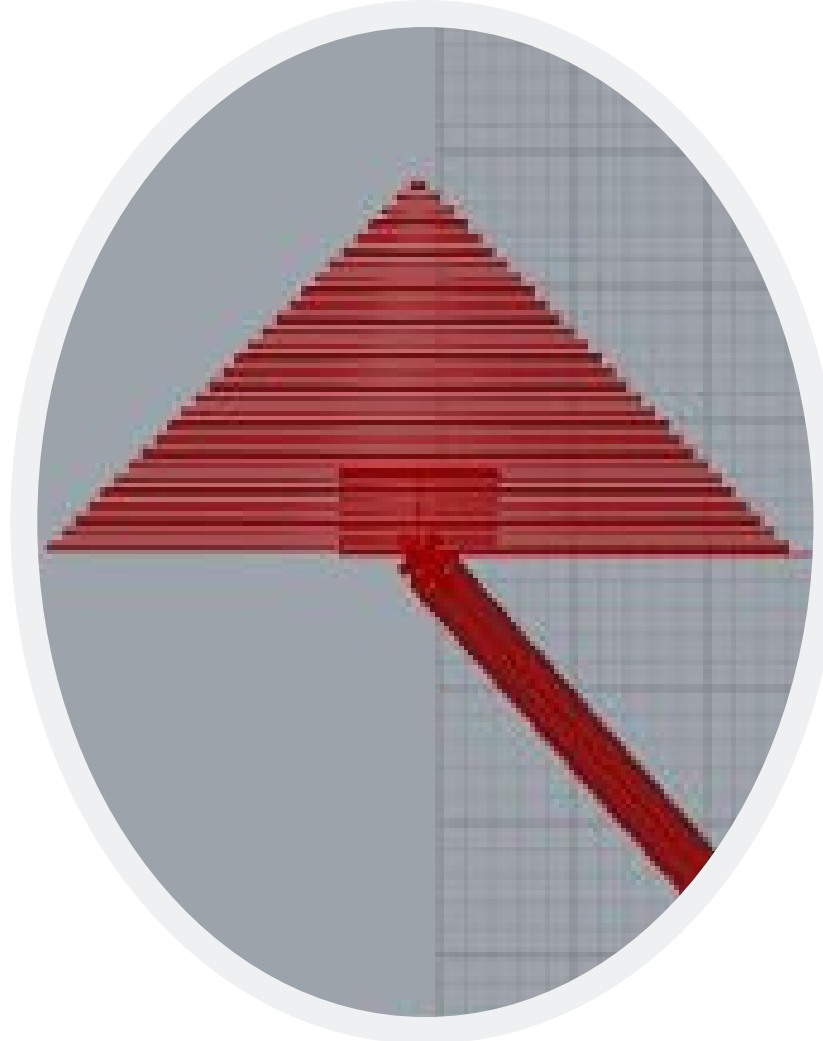
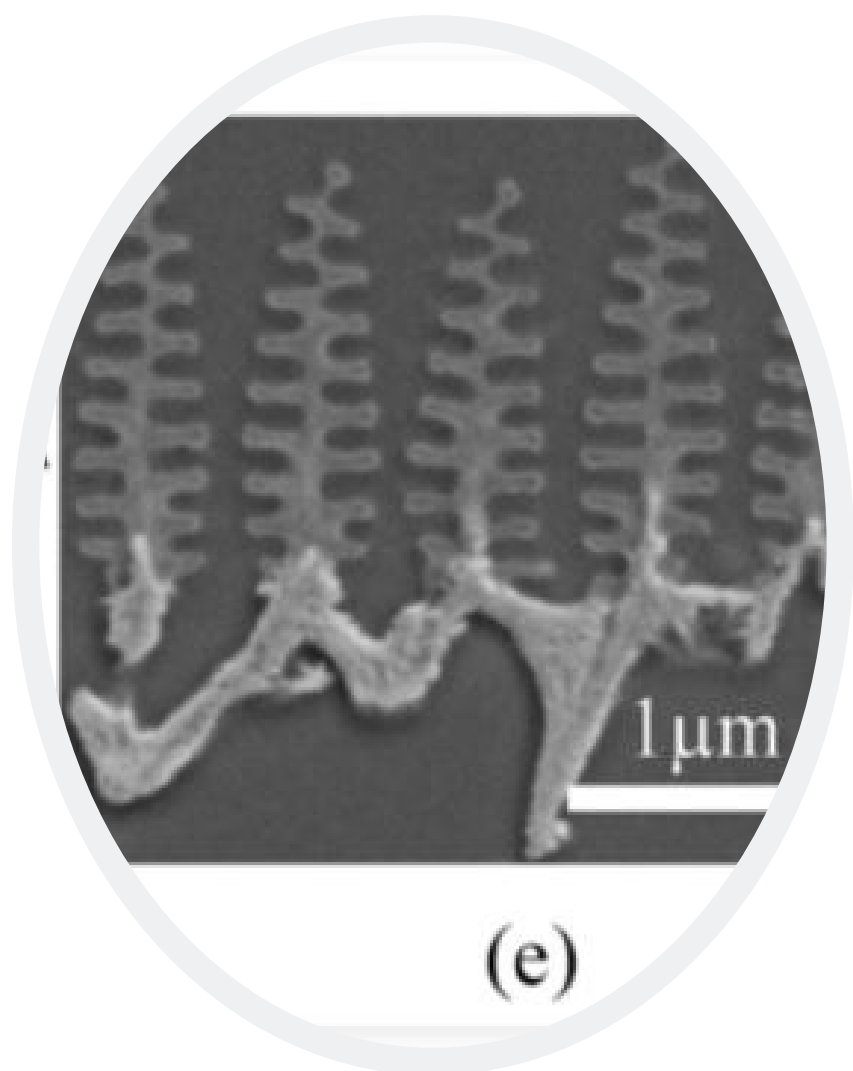


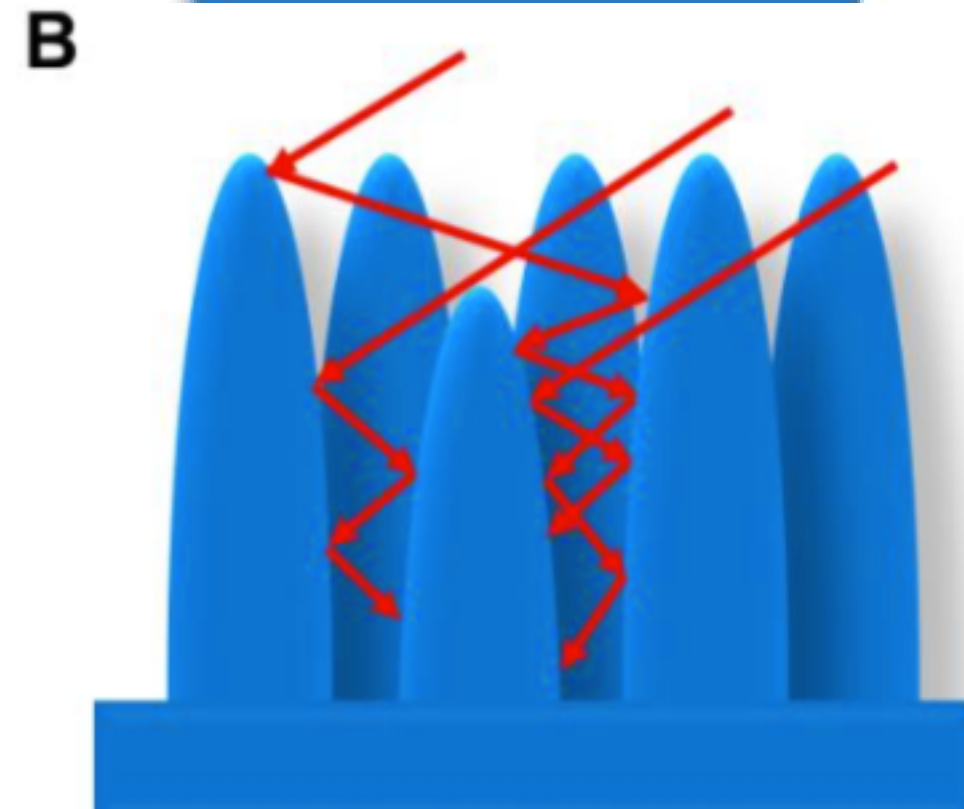
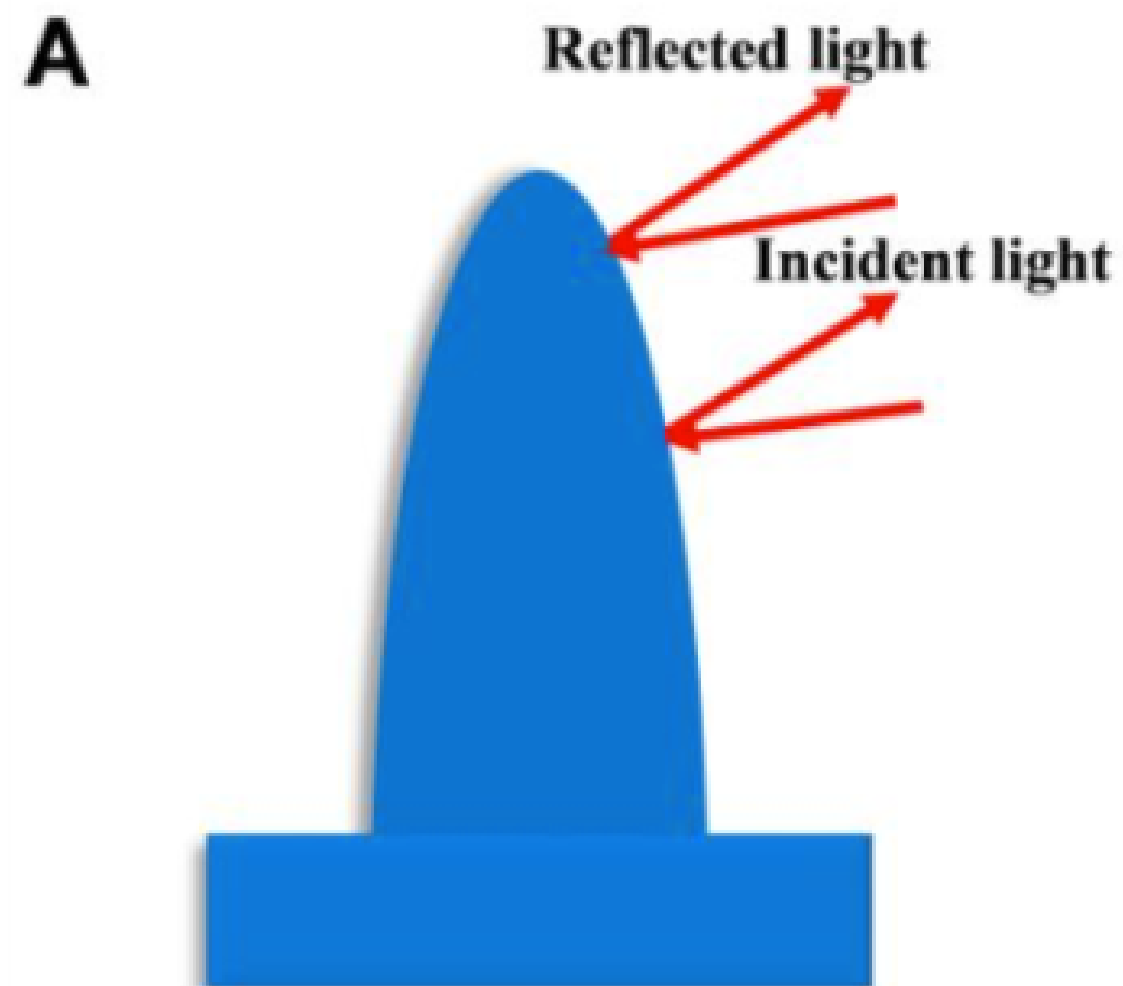
FORME

Les connexions croisées entre les arêtes de l'aile du papillon forment des crêtes inverses et «nanoholes» désordonnés **qui améliorent l'absorption de la lumière.**



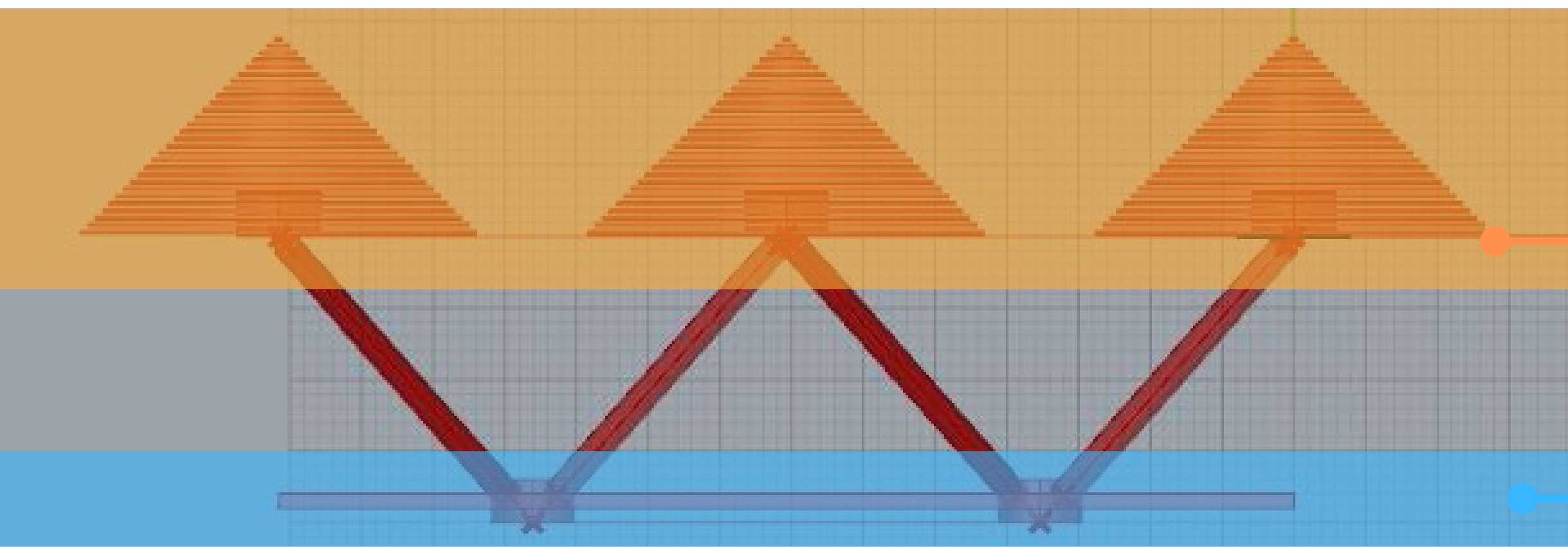






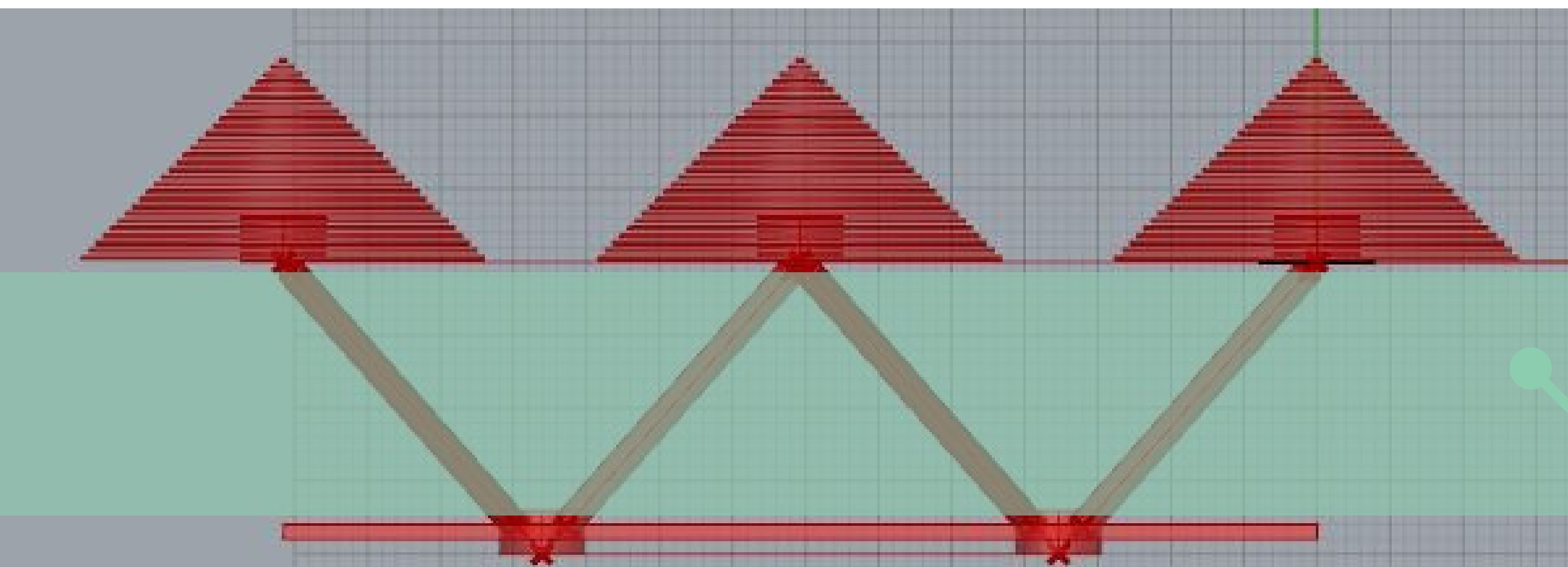
Pour l'unité de macrostructure dont les dimensions sont beaucoup plus grandes que la longueur d'onde de la lumière, la lumière incidente sur celle-ci produirait généralement la réflexion et la diffusion de la lumière après avoir été absorbée en partie (figure 2A).

Lorsque l'espacement et la profondeur possèdent les mêmes contraintes dimensionnelles de longueur d'onde de la lumière entre la topographie de la surface de la structure, les rayons lumineux sont piégés dans l'espace, ce qui génère de multiples réflexions internes (figure 2B). L'absorption maximale du rayonnement incident peut donc être réalisée, ce qui minimise la réflexion de la lumière à son niveau bas.

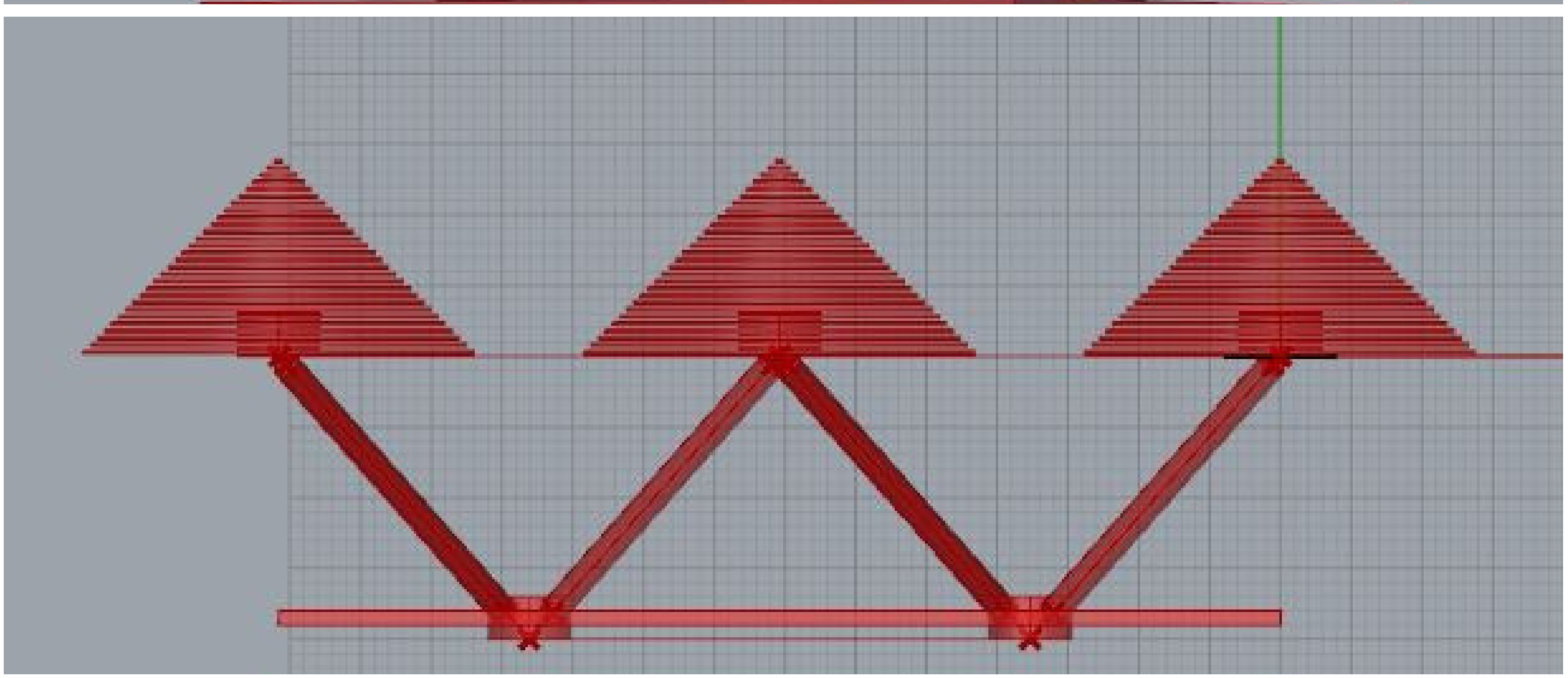
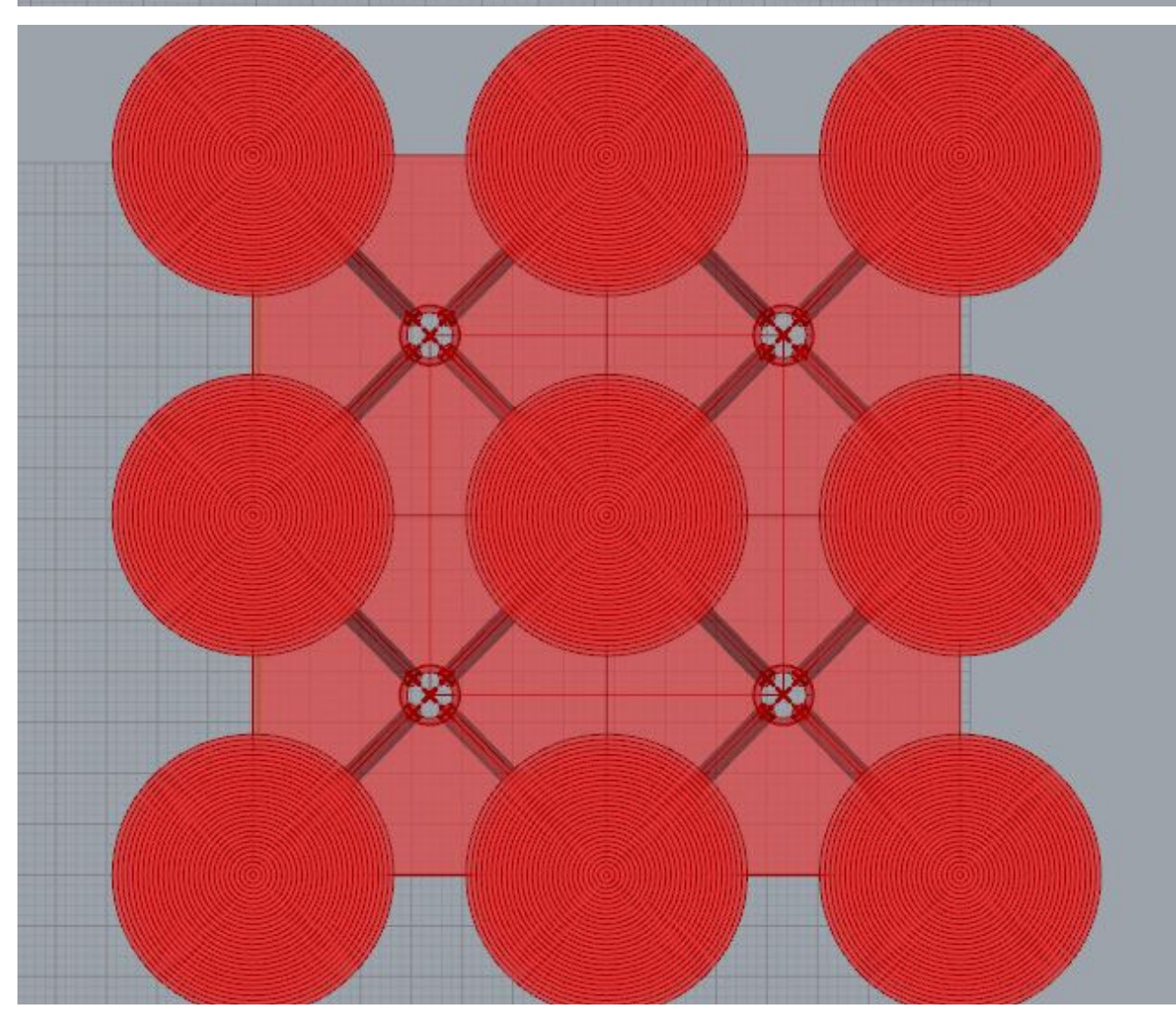
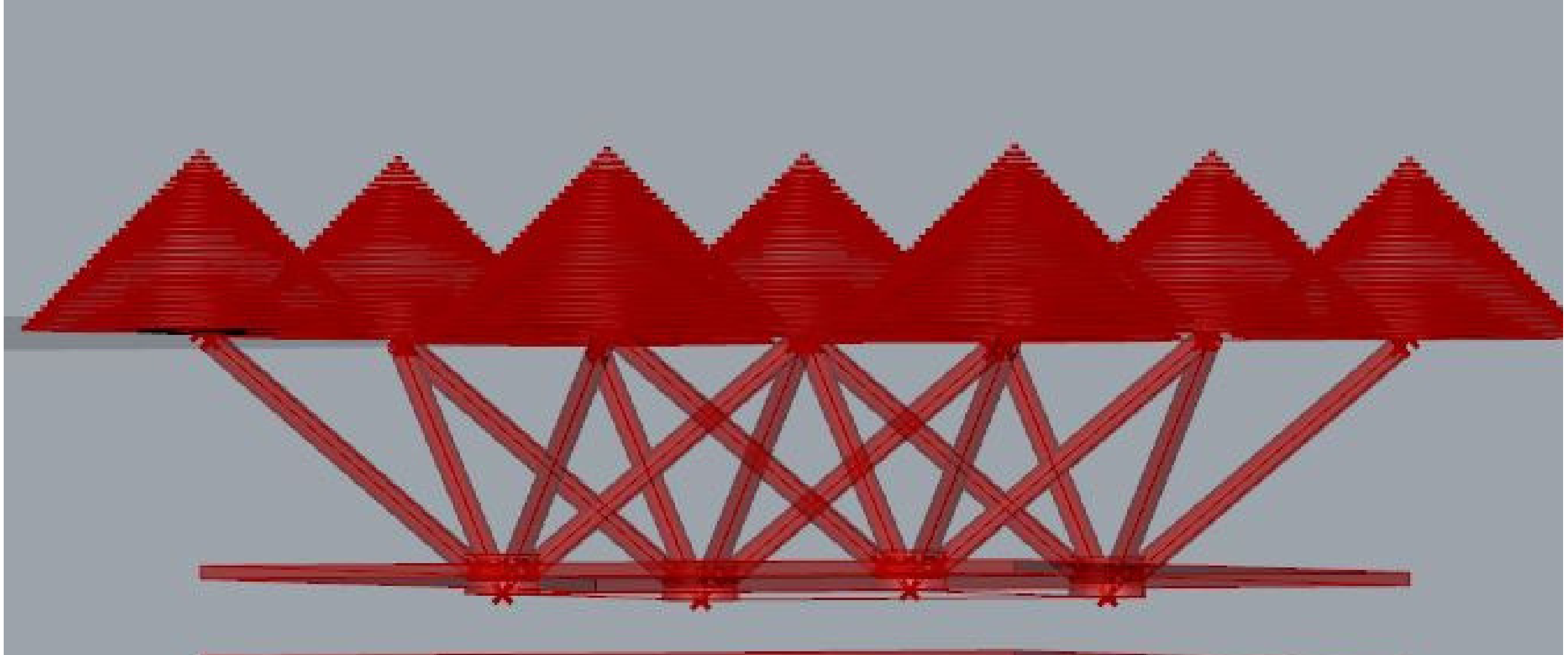
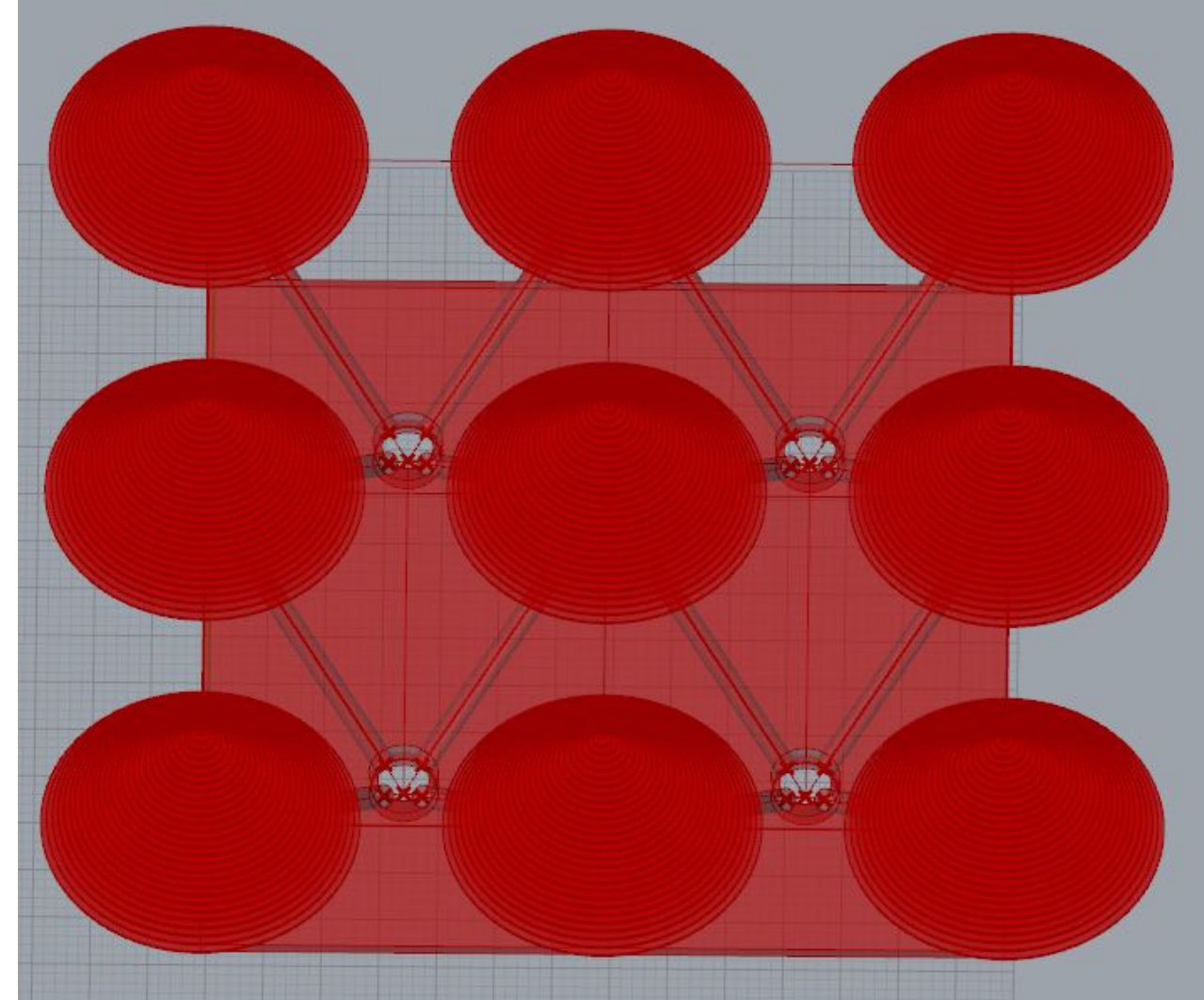


**COUCHE
D'ABSORPTION**

**COUCHE DE
CONSOMMATION**



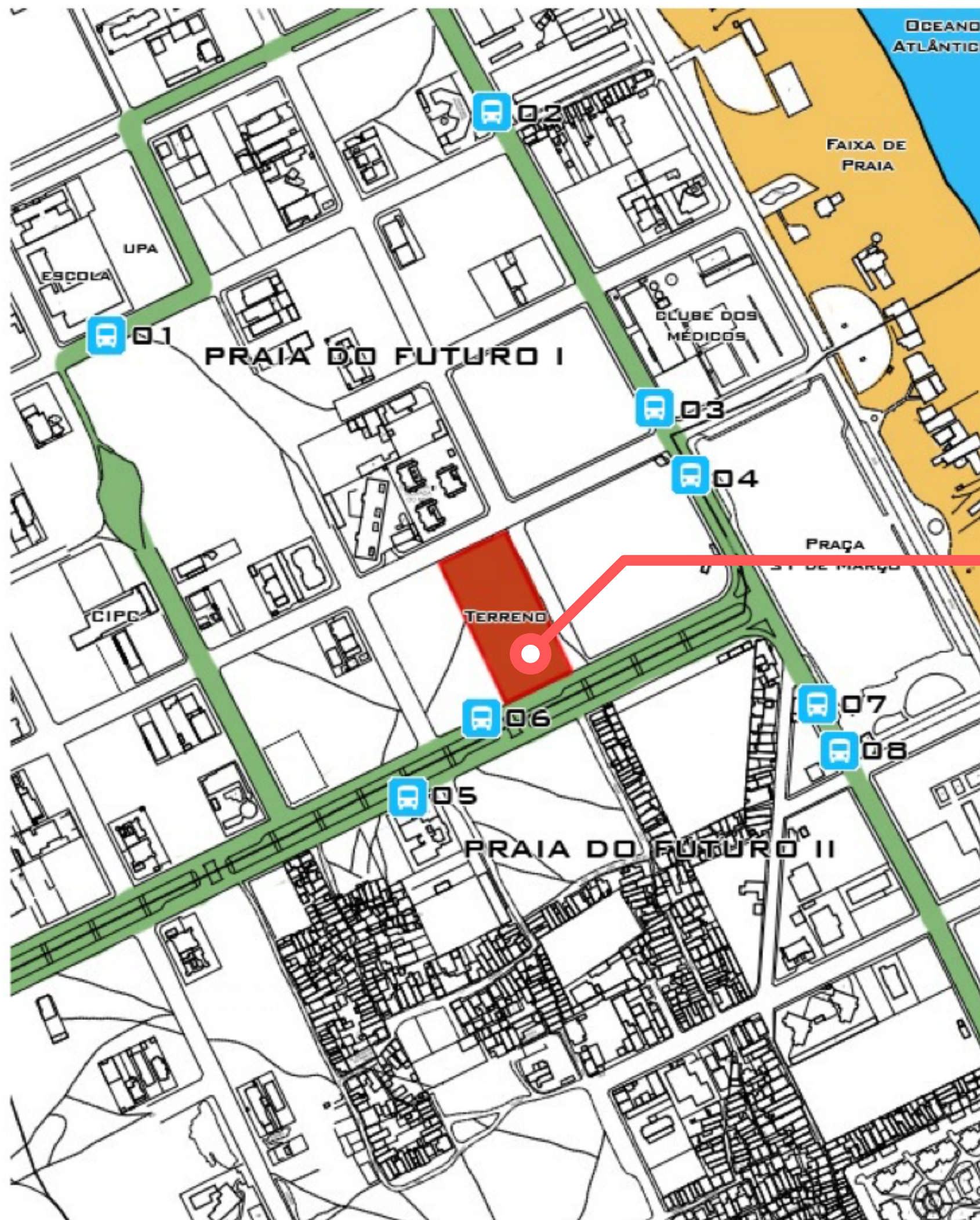
**COUCHES DE
MOBILE**



Terrain

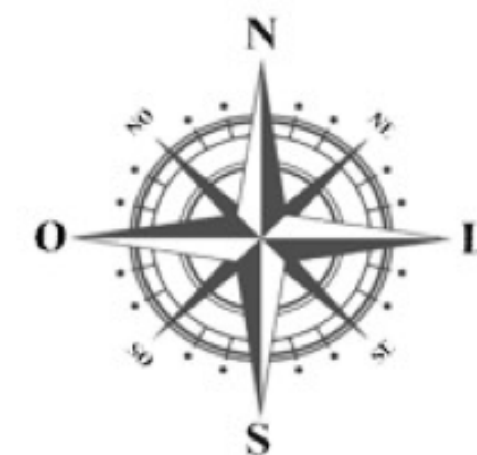
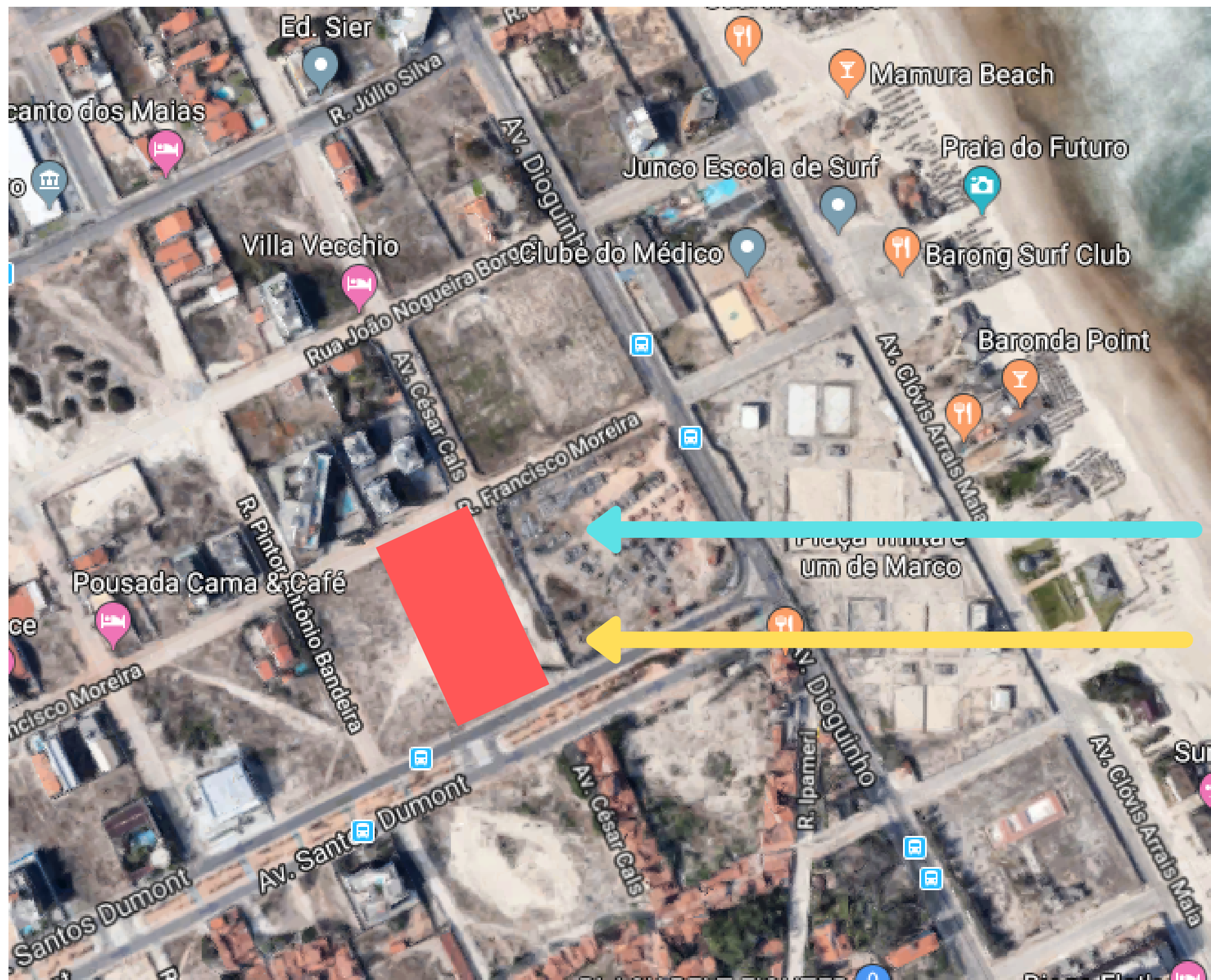


BRASIL, CE, FORTALEZA,
PRAIA DO FUTURO

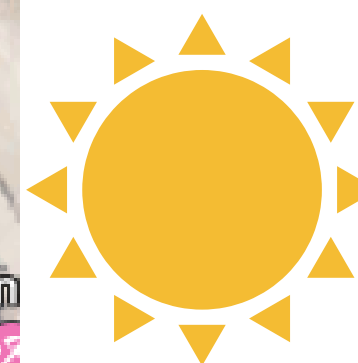


TERRAIN
100 X 50M



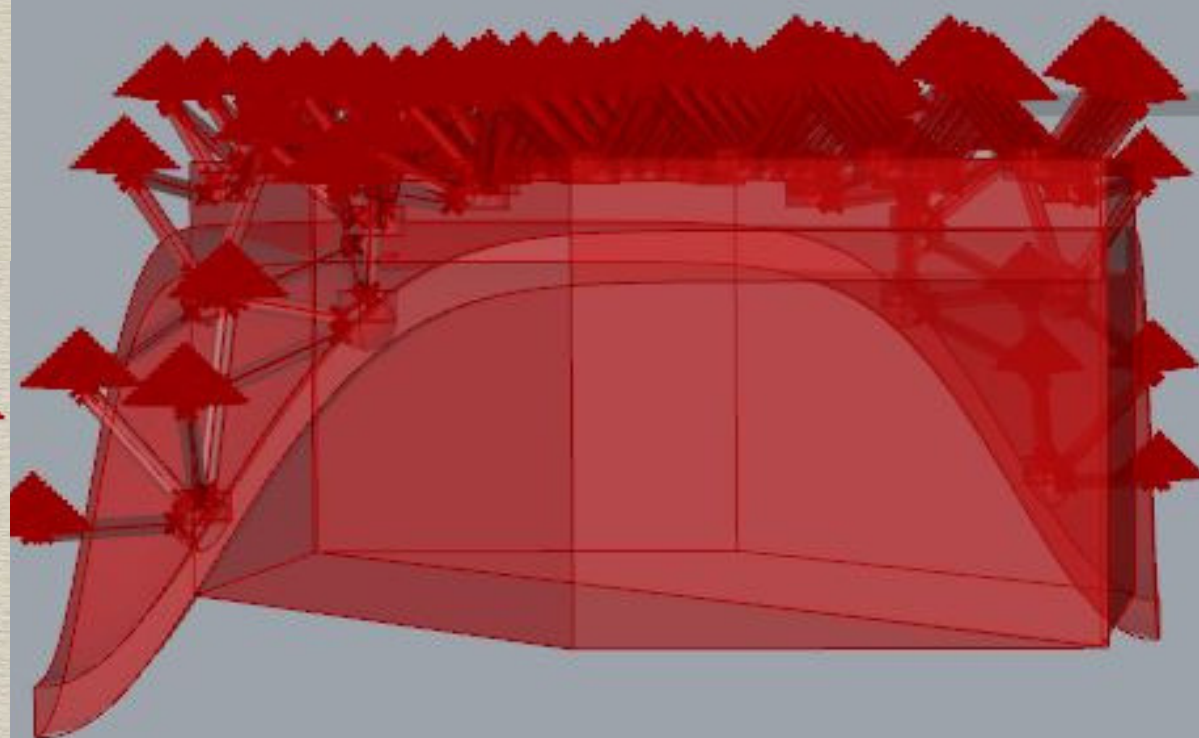
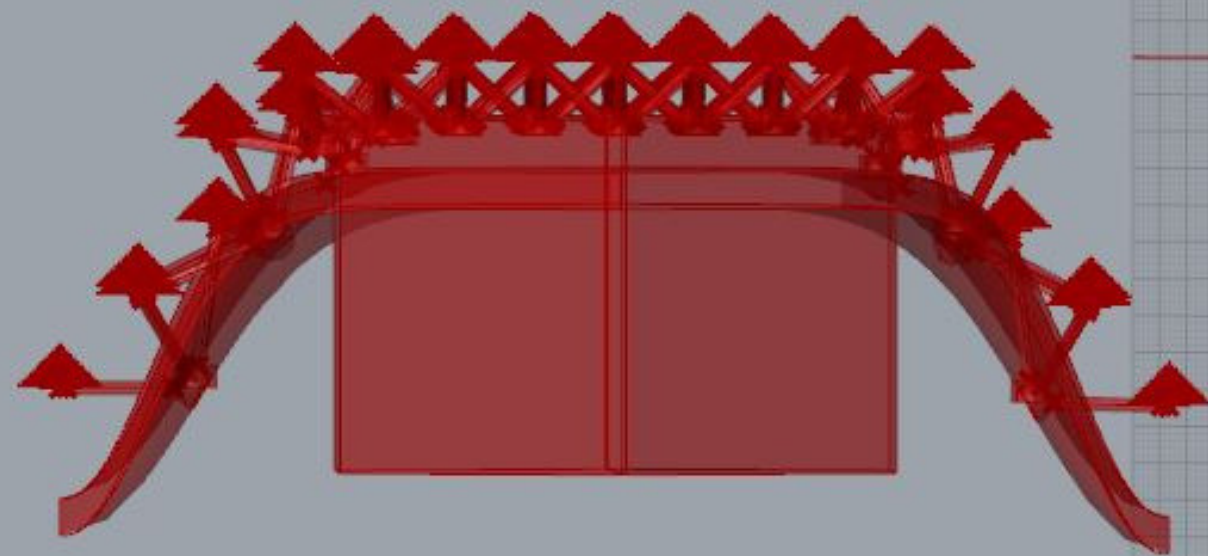
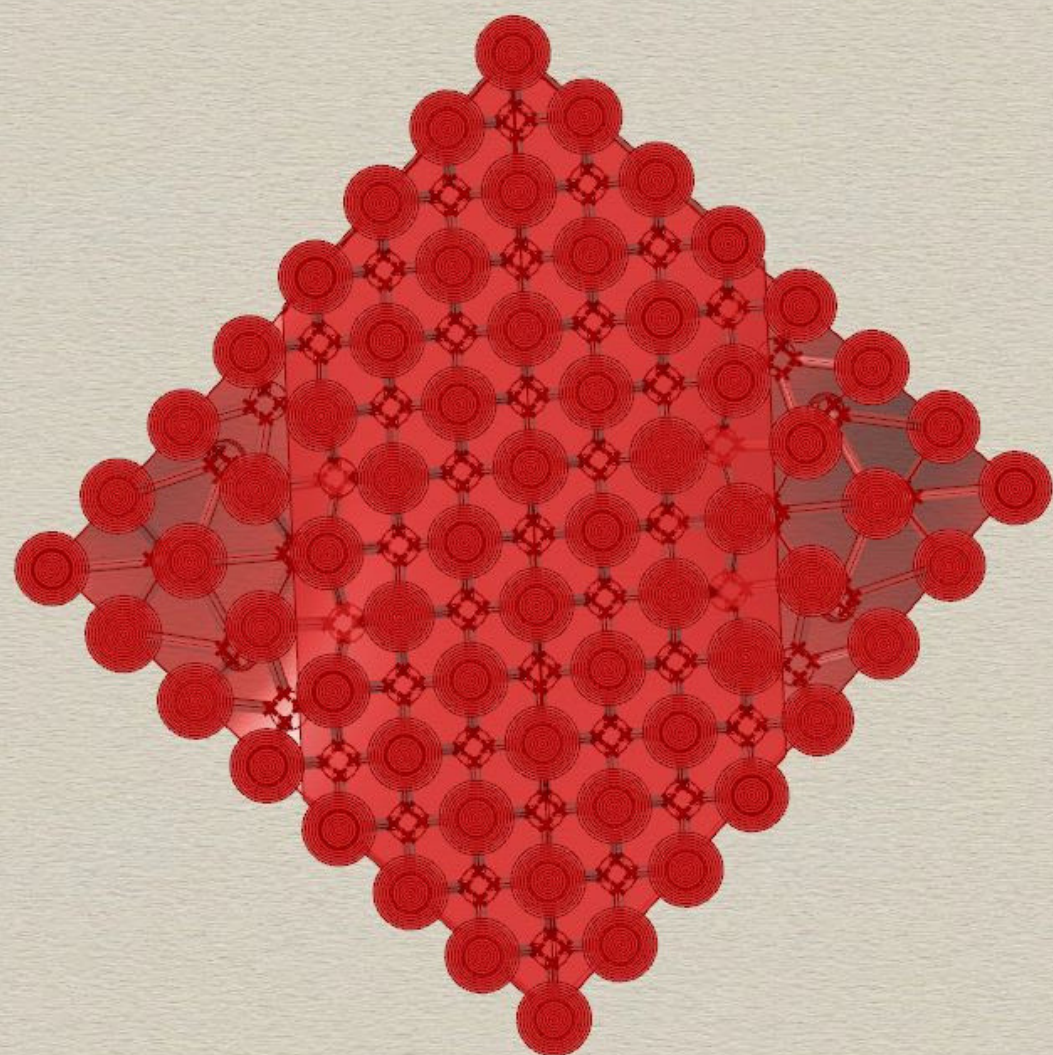
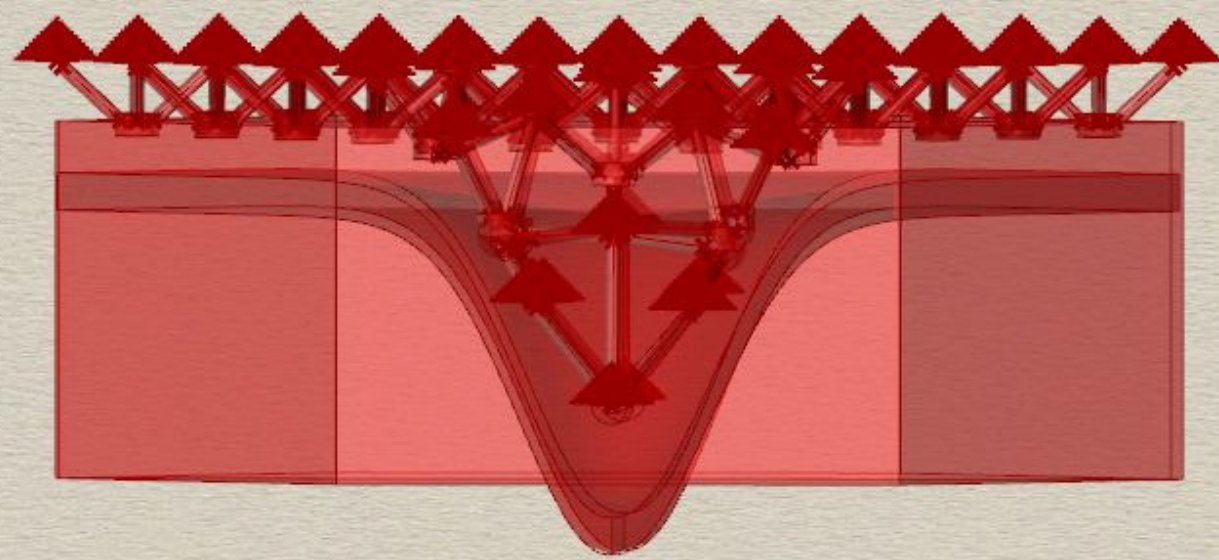
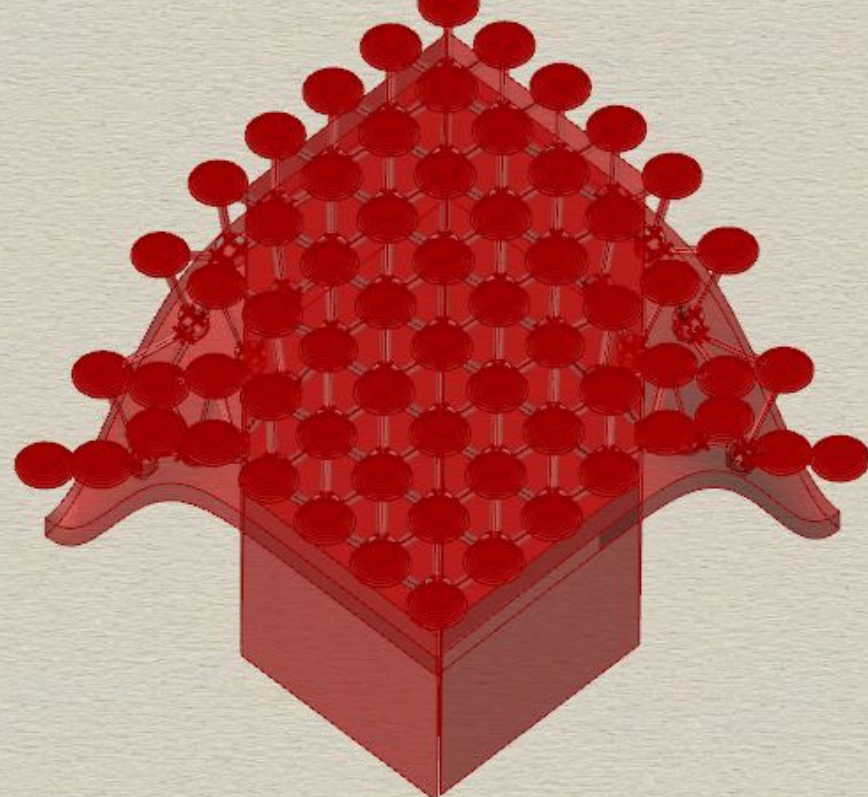
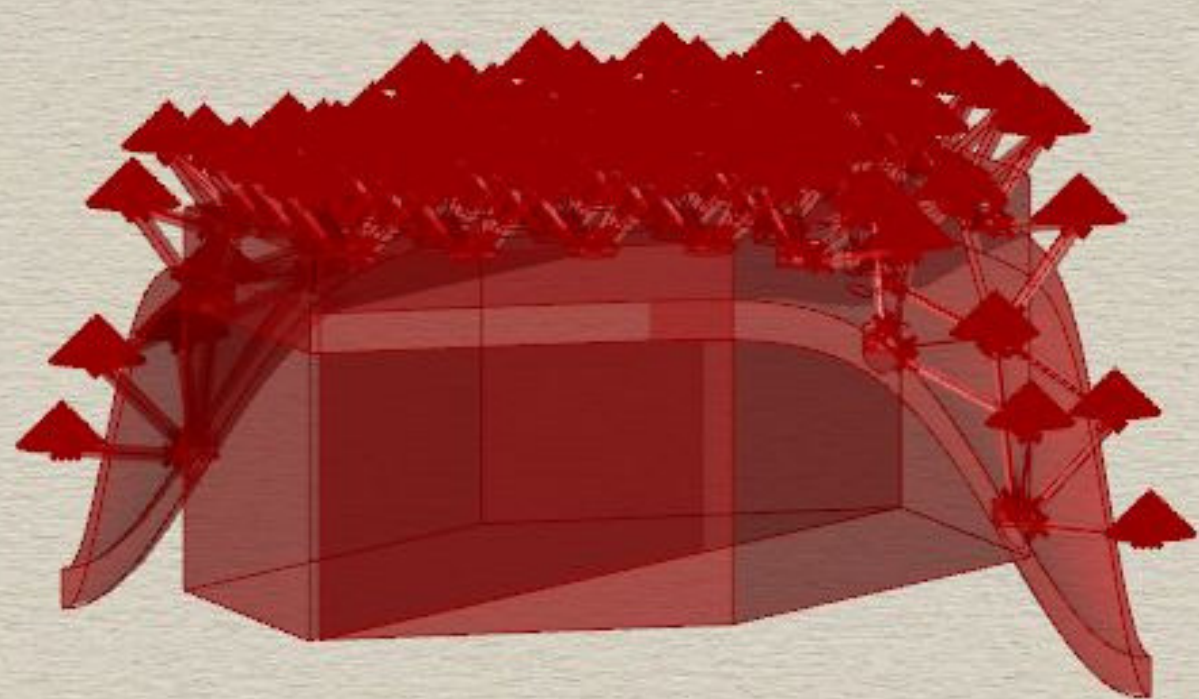


VENT



SOLEIL





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- Han, Z., Jiao, Z., Niu, S., Ren, L., Ascendant Bioinspired Antireflective Materials: Opportunities and Challenges Coexist, Progress in Materials Science (2019), doi: <https://doi.org/10.1016/j.pmatsci.2019.01.004>