





European Cooperation in the field of Scientific and Technical Research  
Building Integration of Solar Thermal Systems – TU1205 – BISTS




# Hybrid Photovoltaic/Solar (HyPV/T) Thermal Façade Module

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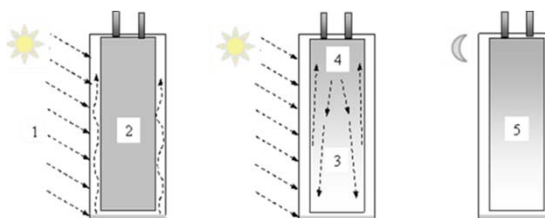


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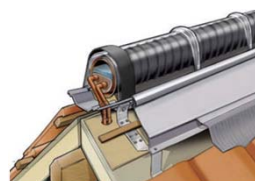
- The concept
- The development (design and fabrication)
- Performance evaluation
- Results
- Next steps
- Collaboration?



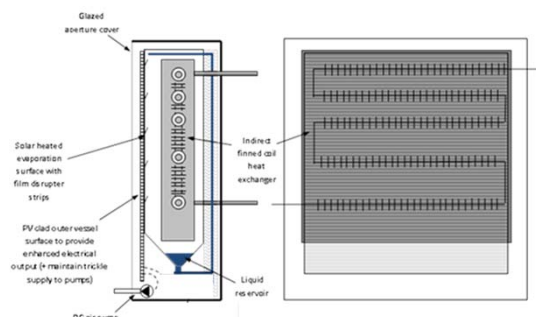
## The inspiration for the HyPVT



## The SolaCatcher concept



## HyPVT (Heat, electricity and insulation)



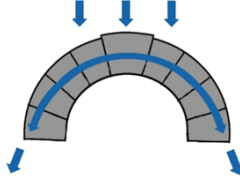
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## Flat but strong....?

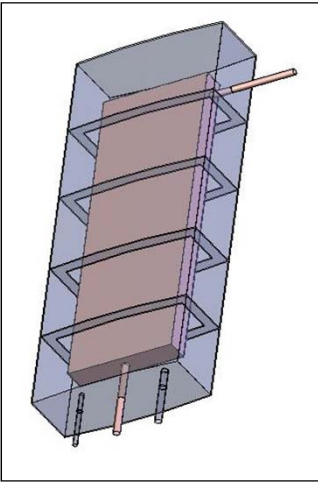
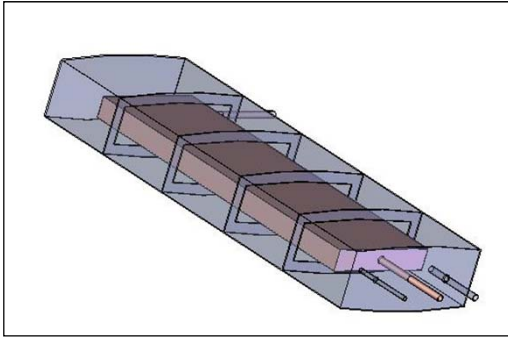
Forces acting on the structure



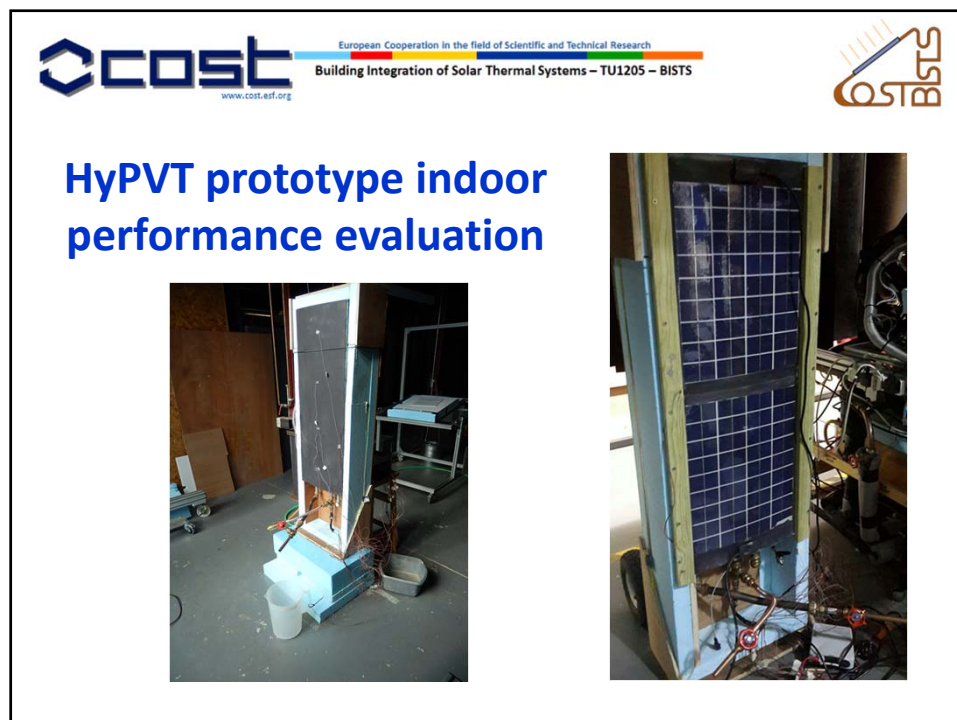
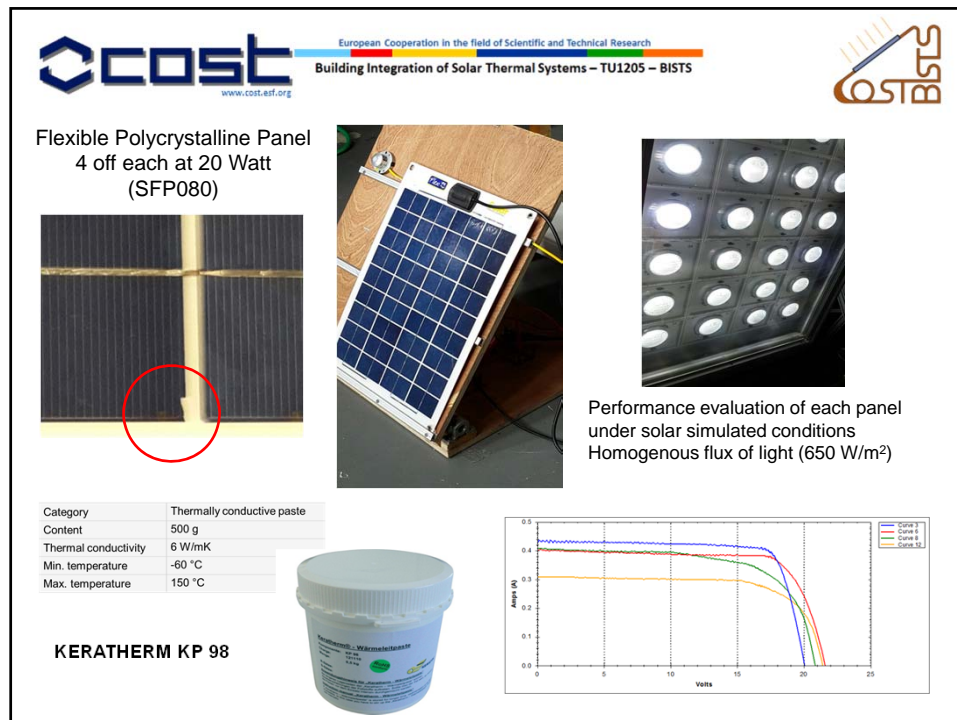
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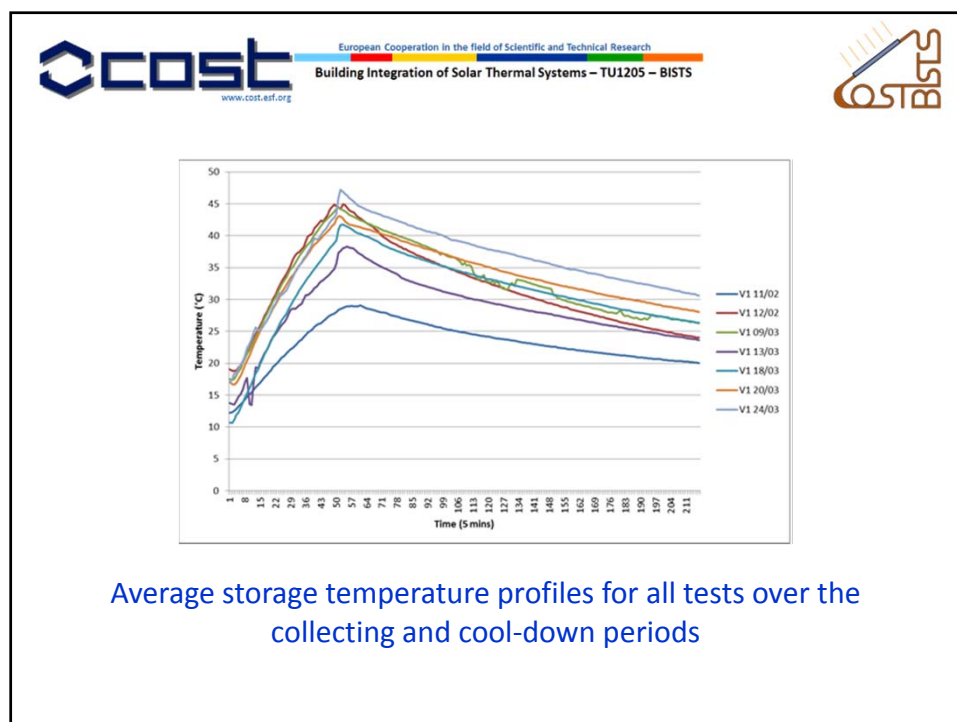
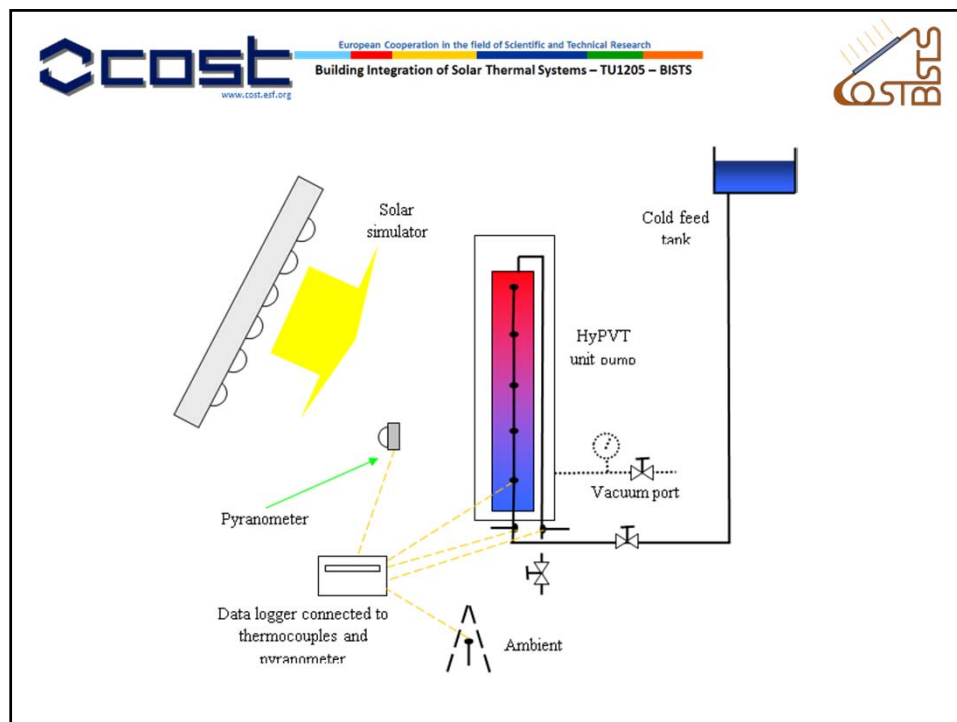
## HyPVT Design



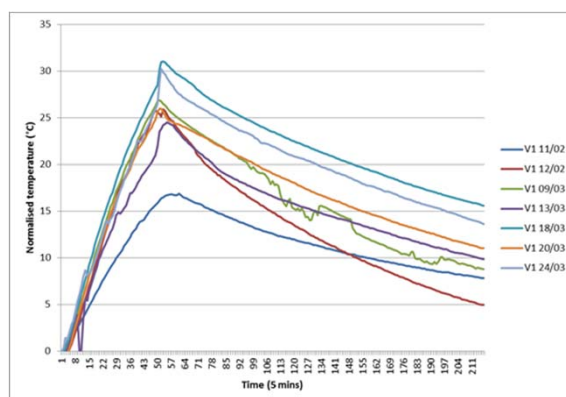








Average storage temperature profiles for all tests over the collecting and cool-down periods



Normalised average storage temperature profiles for all tests over the collecting and cool-down periods

Test	description	Input (kJ)	Output (kJ)	Collection eff (4 hrs)	Retention eff (14 hrs)	Draw off
V1 11/02	no cover no vacuum no PV no pump	3516.31	786.13	<b>0.223</b>	<b>0.314</b>	/
V1 12/02	no cover no vacuum no PV	3416.26	1211.97	<b>0.355</b>	<b>0.286</b>	/
V1 09/03	no cover no PV	3559.33	1258.04	<b>0.353</b>	<b>0.379</b>	/
V1 13/03	no cover	3628.8	1146.71	<b>0.316</b>	<b>0.364</b>	/
V1 18/03	no cover no PV	3677.01	1452.61	<b>0.395</b>	<b>0.417</b>	/
V1 20/03	no cover no PV	3623.62	1215.34	<b>0.335</b>	<b>0.452</b>	/
V1 24/03	no PV	3727.30	1414.69	<b>0.380</b>	<b>0.491</b>	/

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## The next step for the HyPVT concept

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## Collaboration sought in....

- Aesthetic integration
- Structural integration
- Acoustics
- Thermal bridging
- Commercialisation

**Ulster University**

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**Thank you**

