

Skin therapy technology at Bangor University

Treating skin diseases with a highly controllable device using millimetre wave technology.

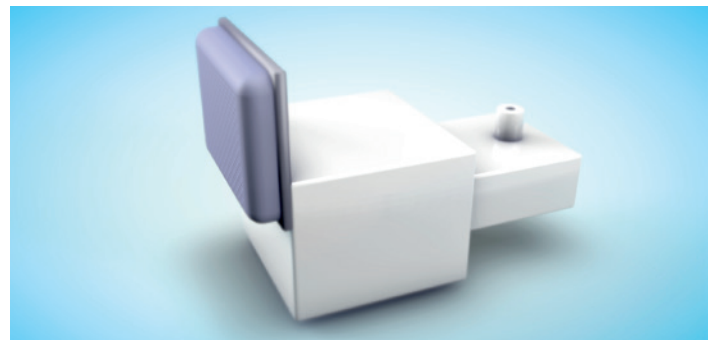
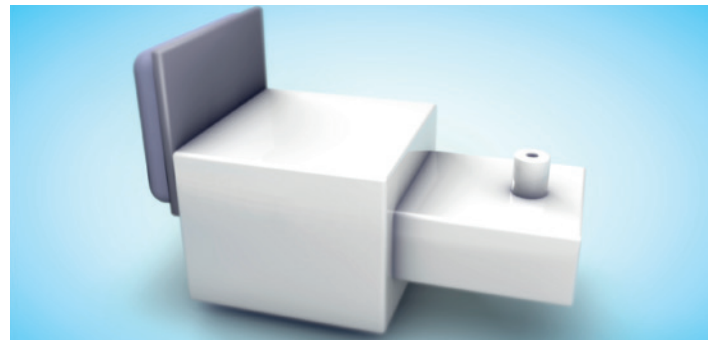
Clinical Need: Treating a range of dermatological disease, including skin cancer.

Bangor University is developing a high-tech solution for treating skin related conditions.

The Technology:

- The highly controllable system provides controlled delivery of millimetre wave energy to precise depths within the epidermis or into the dermis.
- Treatment causes minimal damage to underlying and surrounding tissues and structures.
- Adjustable treatment area.
- Depth of penetration can be precisely controlled by adjusting the energy delivery format.
- Bespoke applicators can be designed to treat a range of conditions relating to the skin, e.g. keratosis, basal and squamous cell carcinomas.
- The applicator can be impedance matched to the impedance of the tissue into which the energy is delivered and the structure can be designed to create a 'block wall' heating profile.
- Possible cosmetic applications are also being discussed, e.g. sub-dermal collagen shrinkage and tattoo removal.

Possible applications in the treatment and accelerated healing of wounds, e.g., chronic ulcers or battlefield injuries.

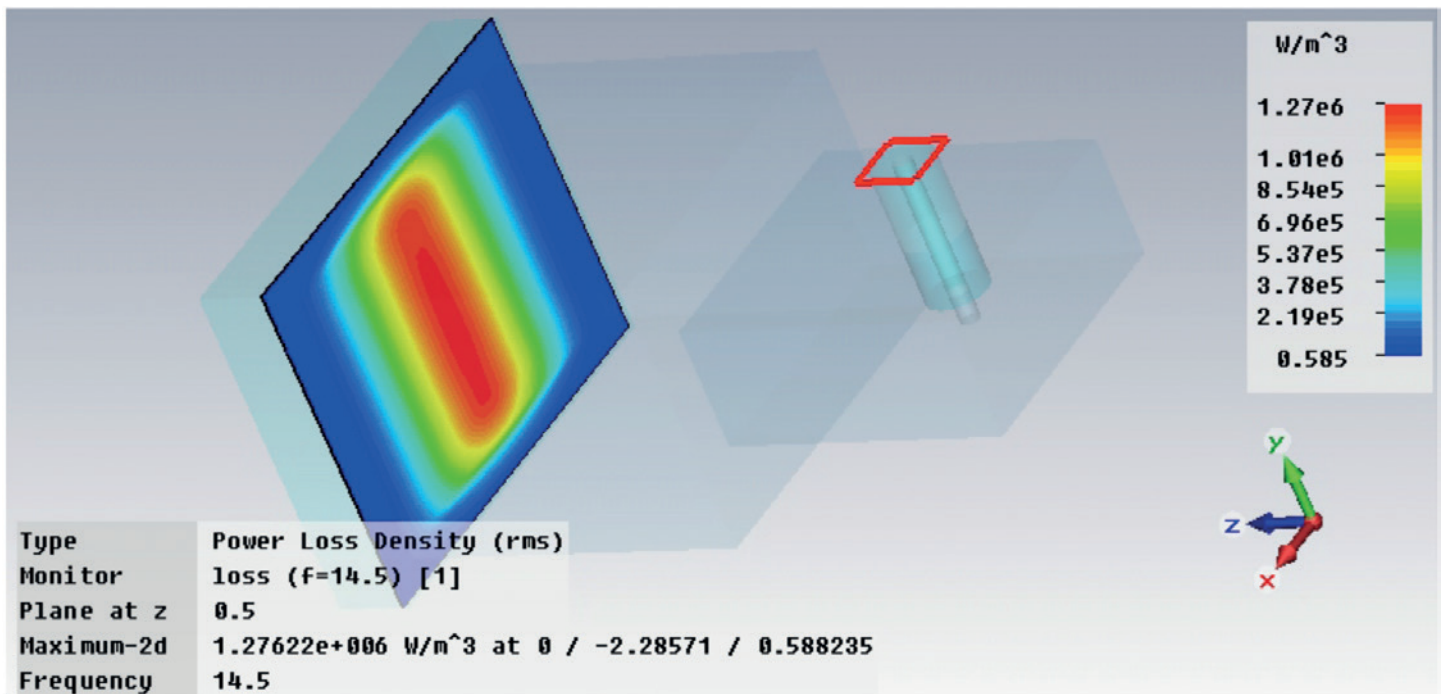


Skin Therapy - Applicator

Clinical Evaluation:

The new technology has been evaluated in vivo in pre-clinical studies at Northwick Park Institute for Medical Research (NPIMR). These studies have demonstrated the successful completion of a number of key development objectives:

- The device delivers a controllable energy over a well defined treatment area resulting in consistent level of ablation of epidermal, papillary dermal and dermal tissues.
- The appropriately ablated sites repair well with regenerated dermis, papillary dermis and epidermis.
- There were no adverse events noted during the treatment period or during the recovery period.
- Good clinical support for the technology - the key opinion leader is a world leading dermatologist.



The power absorption profile at 14.5 GHz at a first power setting 0.5 mm deep into the layer of skin

IP status:

- Two International Patent Applications (PCTs) now in the National Phase (filed in: Europe, USA, Canada, Japan, China and Australia).
- Patents from the first PCT now granted in Australia and China
- New foreground patent application about to be filed.
- One Trademark

Bangor University is in discussion with funding partners however enquiries from other interested parties are always welcome.

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