

# Hot Stones Cooking with an ultralight membrane Solar Concentrator

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Presentation held by

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# Content

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- 1 History of hot stone cooking
- 2 Membrane solar concentrator
- 3 Cavity receiver
- 4 Cooking with hot stones
- 5 Outlook

# 1 History of hot stone cooking

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- Popular cooking method in many cultures for centuries



# 1 History of hot stone cooking

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- Japanese Ishiyaki



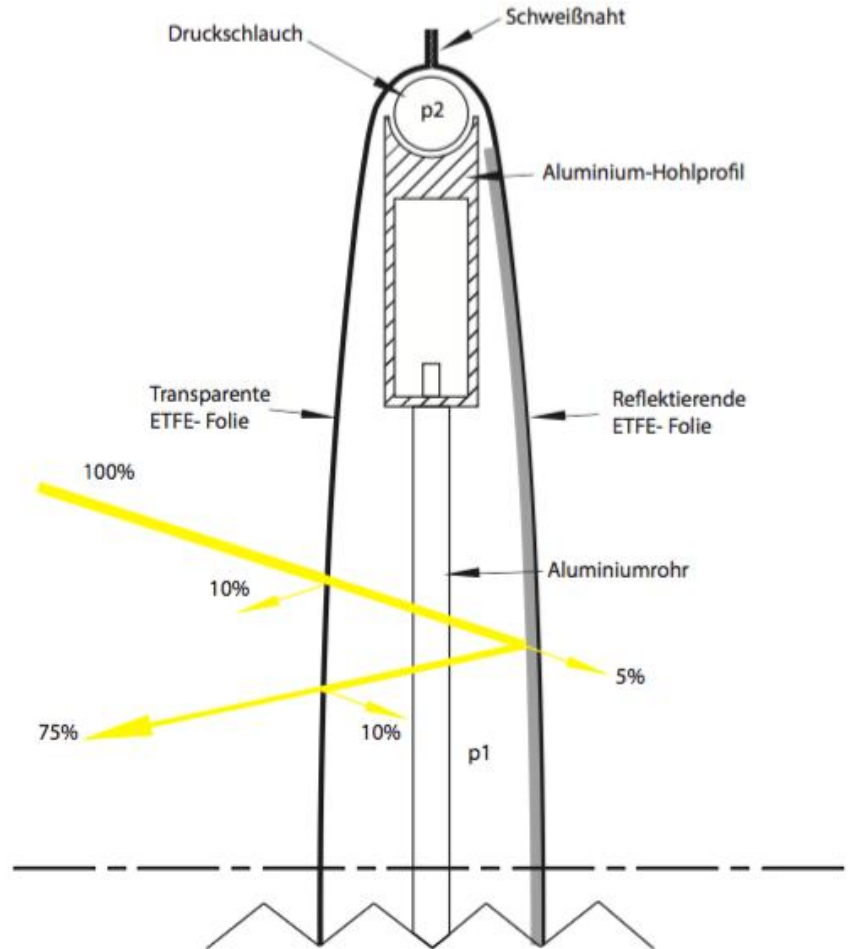
## 2 Membrane solar concentrator

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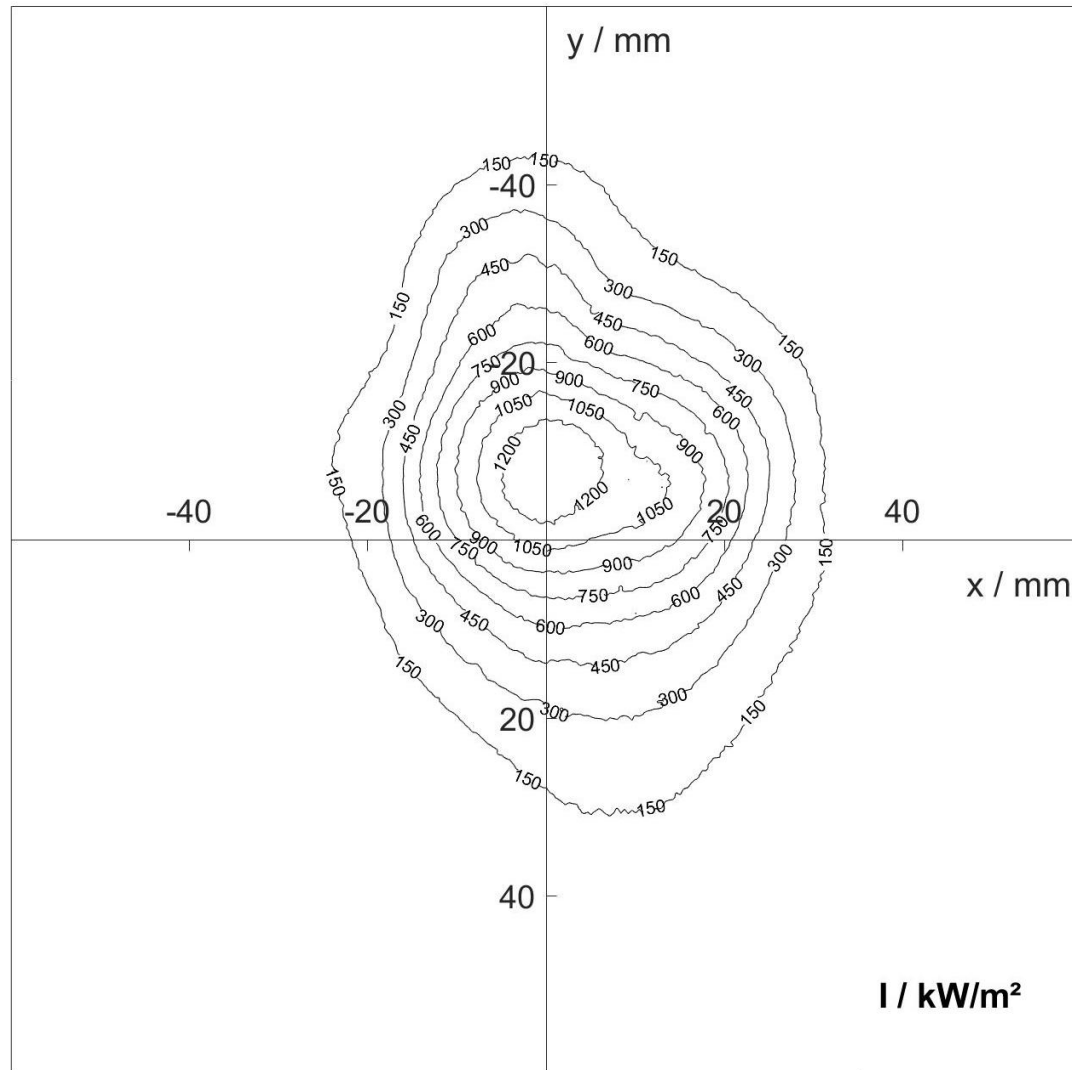




## 2 Membrane solar concentrator

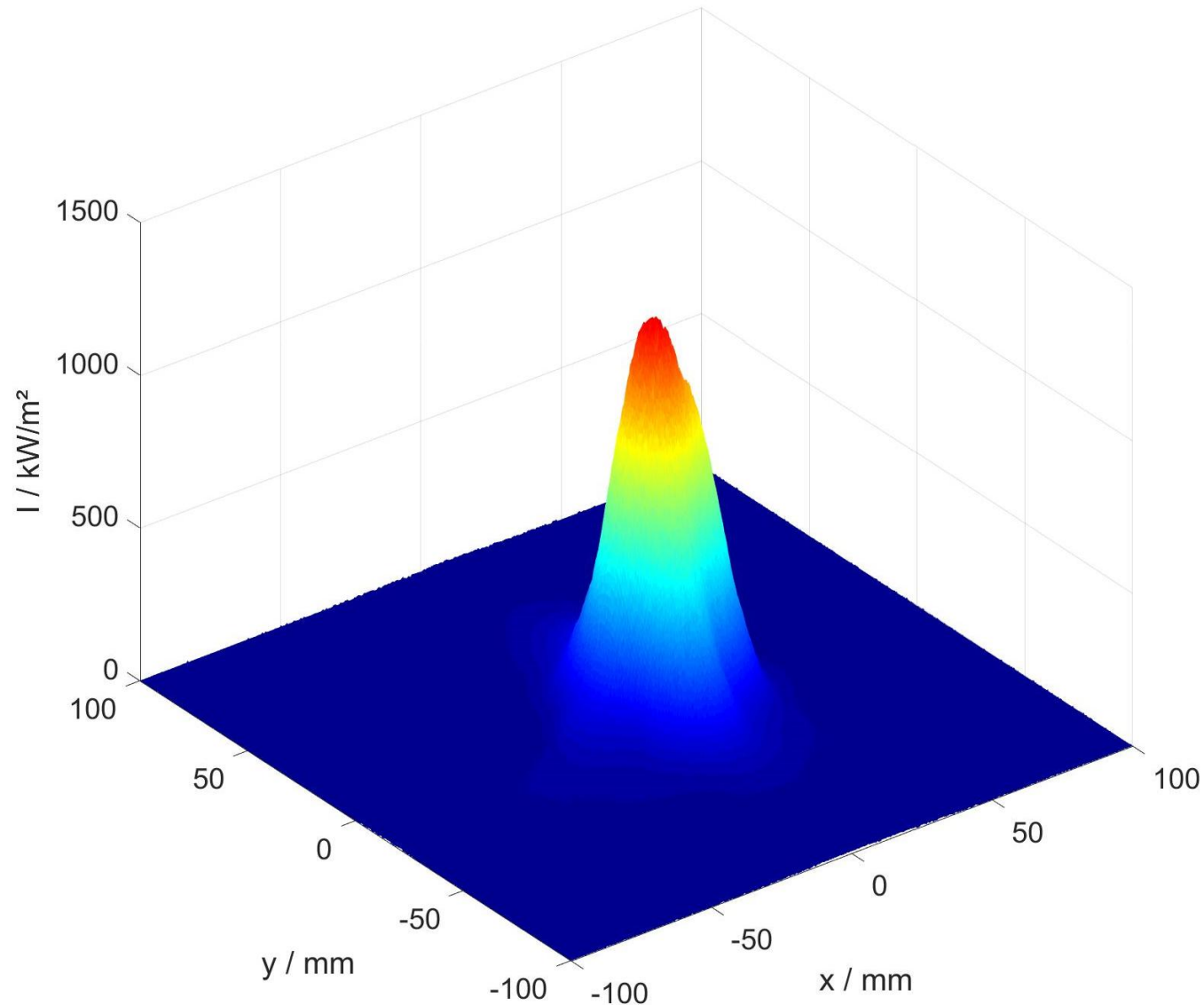


## 2 Membrane solar concentrator



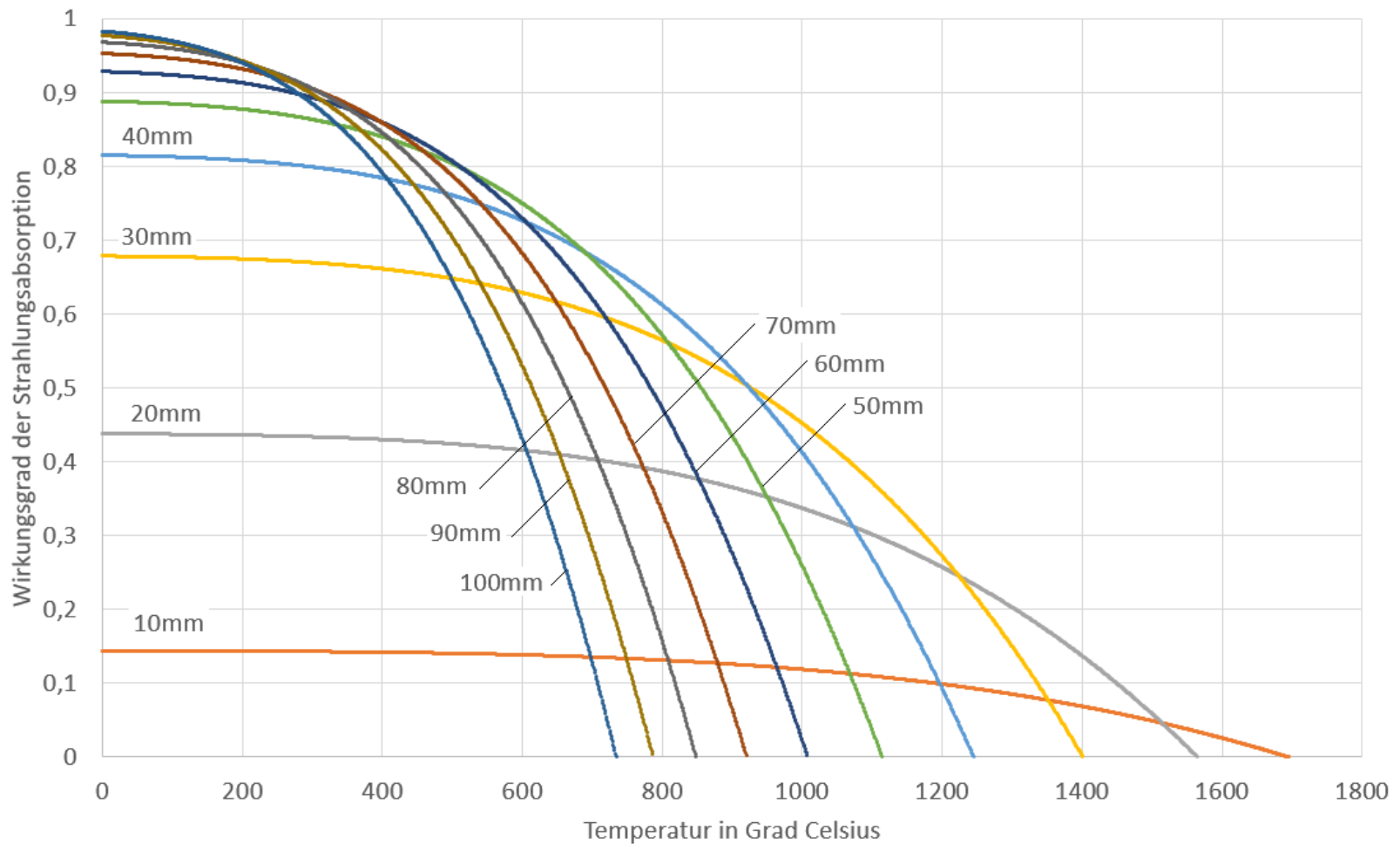
## 2 Membrane solar concentrator

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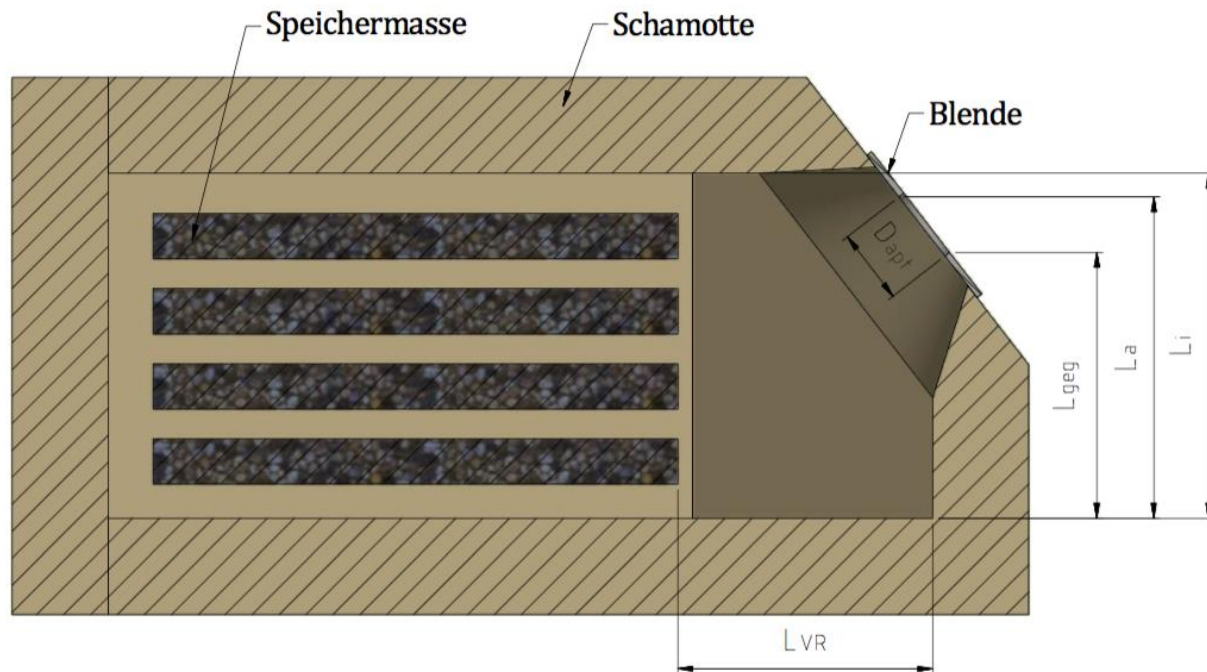




## 2 Membrane solar concentrator



### 3 Cavity Receiver



# 3 Cavity Receiver

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### 3 Cavity Receiver

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### 3 Cavity Receiver

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### 3 Cavity Receiver

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# 3 Cavity Receiver

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# 3 Cavity Receiver



# 4 Hot Stone Cooking

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- Ways of cooking with hot stones:
  - In the receiver.
  - On the stone
  - Immersion

## 4 Hot Stone Cooking: In the Receiver

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- The well insulated receiver is used as an baking oven.
- The aperture of the receiver is closed with an insulating cover
- Stones don't have to be moved



## 4 Hot Stone Cooking: Direct on the stone

- Ca. 30 min Cooking time per plate 10 kg Granite from 400 °C to 200°C

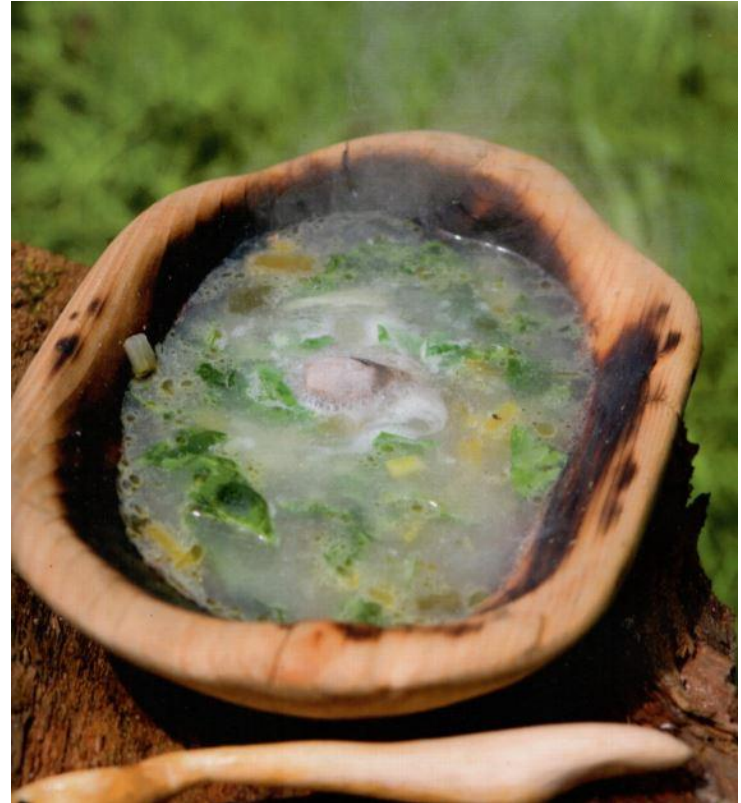




## 4 Hot Stone Cooking: Immersion

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- Most efficient
- A 10 kg and 200°C stone can cook 2,5 liters of water
- Keeps food warm for a while





# Outlook

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- Technology Transfer to commercialization partner:
  - Prototype duplication
  - Application specific optimization of reflector and cavity production

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Thank you for your attention!