

Title (en)

INTEGRATED BUBBLE GENERATION, TRANSPORT AND EXTRACTION FOR ENHANCED LIQUID COOLING IN A MICROCHANNEL HEAT EXCHANGER

Title (de)

INTEGRIERTE ERZEUGUNG, FÖRDERUNG UND EXTRAKTION VON BLASEN FÜR VERSTÄRKTE FLÜSSIGKEITSKÜHLUNG IN EINEM MIKROKANAL-WÄRMETAUSCHER

Title (fr)

GÉNÉRATION DE BULLES INTÉGRÉE, TRANSPORT ET EXTRACTION POUR UN REFROIDISSEMENT DE LIQUIDE ACCRU DANS UN ÉCHANGEUR DE CHALEUR À MICROCANAL

Publication

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Application

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Abstract (en)

[origin: WO2011060186A2] One embodiment can include a heat exchange system for heat exchange with a heat source and a cold source. The system can include a circulation loop. The circulation loop can include a heat emission portion configured to exchange heat with the cold source and a heat absorption portion configured to exchange heat with the heat source, the heat absorption portion comprising a channel. The embodiment can include a liquid pump configured to circulate a liquid through the circulation loop, from an inlet of the channel to an outlet of the channel and a bubble injector coupled to the circulation loop proximal to the inlet of the channel and configured to flow a gas to form a plurality of gas bubbles in the channel, with each of the plurality of gas bubbles monodispersed across the channel, with segments of liquid separating successive gas bubbles of the plurality of gas bubbles.

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