

ASX Announcement ([ASX: AXE](#))

16 August 2021

Biochip patent application enters US National Phase

Archer Materials Limited (“Archer”, the “Company”, “[ASX: AXE](#)”) is pleased to announce the Company’s 100% owned patent application[†] related to its graphene-based biochip technology (ASX ann. [6 Oct 2020](#)) has progressed to the [National Phase](#) of the patent granting procedure and has been filed in the US and assigned a US Application Number, which now allows the Company to pursue and achieve patent granting in the US for the respective patent application[†] (Exhibit 1).

The Company considers the US as a key strategic jurisdiction to protect and commercialise its IP. The Company has also sought National Phase entry in Australia for the biochip related patent application[†]. As patents are only granted in each country by the relevant national patent office, the National Phase entry is a key requirement in the process for the granting of a patent internationally.

Exhibit 1. Description of Archer’s technology patents and patent applications

Priority Date	Technology Summary	Stage & Coverage
3 Dec 2015	■ A quantum electronic device. Quantum electronic devices for processing qubits represented by an electron spin on a new type of carbon nanomaterial and methods for using this material in quantum computing.	Granted JP, KR, CN National Phase AU, US, HK, EP
15 Feb 2019	■ Graphene complexes and compositions thereof. Complexes comprising graphene compositions, methods of synthesising these complexes and compositions, and the use of these complexes and compositions in biomolecular sensing.	National Phase US, AU

Archer strategic themes

■ Quantum Technology ■ Human Health

Term of protection available would typically be 20+ years from the Priority Date.

Patents are required for successful commercialisation in the semiconductor industry

Archer’s patents and patent applications are core Company assets that allow for value creation through any future technology development, licensing, monetisation, and transactions for revenue generation. Patent applications[‡] related to the Company’s ¹²CQ chip are progressing in later stages of the patent granting procedures in the US and Europe.

Archer recently expanded its access to institutional deep tech infrastructure and hired new personnel to develop its biochip technology (ASX ann. [11 Jun 2021](#)). The type of knowledge underpinning Archer’s IP is very difficult to acquire and is supported by outcomes of years of R&D that ranks in the top percentiles of peer-reviewed scientific published works globally[§].

[†] WO2020163921 - Graphene Complexes and Compositions Thereof

[‡] WO2017091870 - A Quantum Electronic Device

[§] Includes 25+ publications, with articles related to qubits (<https://www.nature.com/articles/ncomms12232>), graphene production (<https://www.nature.com/articles/nnano.2008.365>), and graphene materials (<https://pubs.rsc.org/en/content/articlelanding/2014/cc/c4cc04521a#!divAbstract>).

About Archer

Archer is a technology company that operates within the semiconductor industry. The Company is developing and commercialising advanced semiconductor devices, including chips relevant to quantum computing and medical diagnostics.

The Board of Archer authorised this announcement to be given to ASX.

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