

## **JUNE 2022 QUARTERLY ACTIVITIES REPORT**

### **HIGHLIGHTS**

#### **Graphene Based Additives**

- ▶ **A commercial manufacturing process, representing significant Know-How, developed to produce graphene based additive products**
- ▶ **Specialised graphene based additive manufacturing equipment identified, trialled, and ordered with a manufacturing site located**
- ▶ **Graphene based additive samples, from manufacturing trials, available for Customer testing**
- ▶ **Collaborative discussions advancing with multiple global coatings companies**
- ▶ **Patent filing activities continue in support of IP protection**
- ▶ **Undertaking research in specialist graphene based coatings for the Hydrogen energy sector**

#### **Sparc Hydrogen Joint Venture**

- ▶ **Preliminary Techno Economic Assessment (TEA) for Sparc Green Hydrogen technology on track for delivery in Q3 2022**
- ▶ **Specialist engineering consultant engaged to complete gap analysis and costing review for the TEA**
- ▶ **Research continues to demonstrate advances in Solar to Hydrogen efficiencies under a range of conditions and reactor designs**
- ▶ **Patent application lodged in Q2 2022 with opportunities for other patent application filings relating to additional photocatalytic equipment being explored**
- ▶ **Work ongoing at Sparc Technologies' laboratory on improving photocatalyst coatings**

#### **Corporate**

- ▶ **\$2.1 m cash at bank as of 30 June 2022**
- ▶ **F.Y. 21 R&D Tax Rebate has been approved by AusIndustry with a refund of approximately \$500k to be paid within the current quarter**



Sparc Technologies Limited (**ASX: SPN**) (**Sparc** or the **Company**) is pleased to provide its June 2022 Quarterly Activities Report. During this quarter, significant progress was made in several key business areas that will combine to ensure the successful commercialisation of Sparc's Graphene Based Additives & Coatings products. Sparc's Green Hydrogen project research program is progressing as planned.

In June, the Company announced that it was preparing to commercially manufacture graphene based products. ([ASX Announcement 22 June 2022](#)) Discussions also continued with global coatings companies with test data, to ISO standards, shared under Confidentiality/Non-Disclosure Agreements and Material Transfer Agreements.

Critically, Sparc has been able to overcome one of the key challenges faced by the graphene industry, that of how to safely handle and scale manufacture of graphene containing material.

Homogenous dispersion is vital if graphene is to impart its unique and varied attributes when incorporated into targeted materials. The ability to produce a homogeneous dispersion is a very real challenge given the propensity for graphene to re-agglomerate. This technical issue was recognised by Sparc and with the development of Know How, Sparc has now addressed this issue. This Know How, when applied to our *Graphene Based Additives* materials, will support the ready adoption of graphene into materials used within the Construction Sector.

Given this Know How, Sparc is investing in a manufacturing process, with manufacturing equipment having been identified, trialled, and ordered with a manufacturing site located. Manufacturing will support a range of Graphene Based Additive products initially targeted for use in Coatings and Composites products. Marketing collateral i.e., branding and trade-marks will support market activities. Patent filing activities continue with *Graphene Based Additive* IP to be protected.

An on-going, comprehensive test program continues to confirm the significant performance improvement in epoxy based coatings (typically used within the Protective & Marine Coatings market) when employing Sparc's Graphene Based Additives.

The Company is inviting Customers within the Construction sector to collaborate and explore the opportunities for product enhancement by employing Sparc's graphene based additives.



## Sparc Hydrogen Joint Venture

*In February 2022, Sparc Technologies announced that it had entered into binding Agreements with global green energy company Fortescue Future Industries (**FFI**) (100% subsidiary of Fortescue Metals Group, ASX: FMG) and the University of Adelaide, forming the Sparc Hydrogen Joint Venture.*

*Sparc Hydrogen is seeking to deliver a process aimed at producing commercially viable green hydrogen directly from water and sunlight via thermo-photocatalysis (**the Sparc Green Hydrogen Project**). The green hydrogen technology has been developed by the University of Adelaide (**UoA**) and Flinders University. FFI will support this important research and development project as an emerging world leader in green hydrogen technology and production.*

*The Sparc Green Hydrogen Project will seek to develop a process known as Thermo-Photocatalysis, which employs the sun's radiation and heat to convert water into hydrogen and oxygen. Adopting this process to produce green hydrogen means that renewable energy from wind farms and/or photovoltaic solar panels and electrolyzers is not needed.*

*As such, capital and operating expenditure is anticipated to be lower than other proposed forms of green hydrogen production. This technology can also potentially be adopted for remote, onsite use, reducing the reliance on long distance hydrogen transportation and/or electricity transmission.*

## Project to date

The technology developed was initially supported by ASTRI (Australian Solar Thermal Research Institute), with contributions totalling A\$2.5m over a 4.5-year period from the University of Adelaide and Flinders University.

Current research is focused on increasing the STH (Solar to Hydrogen) percentage with laboratory results demonstrating a significant increase in hydrogen production under optimised conditions. A provisional patent application (Australian Provisional Patent Application – Photocatalytic Apparatus) was filed by University of Adelaide earlier this year in relation to this matter.

The joint venture company, Sparc Hydrogen entered into a Research Agreement with the University of Adelaide in respect of Stage 1. [\*\(Refer to March 2022 Quarterly Activities Report for details.\)\*](#)

The technology (including all IP) under development is being provided by the University of Adelaide to Sparc Hydrogen under an exclusive licence. The licenced technology will be assigned to Sparc Hydrogen



subject to all the staged financial commitments being met. No royalties are payable by Sparc Hydrogen throughout the Sparc Green Hydrogen Project.

Sparc is continuing with the development of several graphene based coatings' applications in the energy sector, particularly in relation to Sparc's photocatalytic hydrogen project in its JV with the University of Adelaide and Fortescue Future Industries (FFI).

#### **Outlook for Next Quarter – Sparc Graphene**

- Continue patent filing activities for Sparc's Graphene Based Additive product range
- Communicate results to the market for Rd 5 of our testing program (for Coatings) and commence Rd 6 testing which is aimed at validating further sources of graphene
- Continue discussions with major Coatings manufacturers in pursuit of collaborative agreements
- Continue evaluation of a biocidal free graphene based antifouling product
- Progress R&D programs to support product development in Concrete and Composites sectors
- Finalise development plans for the local manufacturing of Sparc's *Graphene Based Additives*

#### **Outlook for the next Quarter – Sparc Hydrogen**

- Complete the production of the Techno Economic Assessment (TEA) for Sparc's Green Hydrogen project and publish
- Progress research program as per the current plan

**The company is looking forward to providing significant updates on all projects in the second half of 2022.**

#### **Corporate**

##### **Cash**

As at 30 June 2022, the Company had a reported cash position of \$2.1m.

##### **Related Party Payments**

In line with its obligations under ASX Listing Rule 4.7C.3, Sparc Technologies Limited notes that the only payments to related parties of the Company, as advised in the Appendix 4C for the period ended 30 June 2022, pertain to payments to directors for reimbursement of arrears of Directors Fees and Travel Expenses totalling \$138,000.

##### **Statement of Commitments**

The current expenditure is covered by the Statement of Commitments<sup>1</sup> outlined in the Prospectus dated 5 October 2020. A summary of expenditure to date is outlined below:

	Expenditure since listing to 30 June 2022 (\$000)	Expenditure described in Use of Funds in prospectus (\$000)
Cost of offer	(406)	(470)
Corporate administration	(2,450)	(1,000)



Research and development <sup>2</sup>	(4,200)	(1,300)
Graphene plant construction	(591)	(1,900)
Marketing and business development	(219)	(730)
Working capital	(61)	(900)
<b>Total</b>	<b>(7,927)</b>	<b>(6,300)</b>

<sup>1</sup> The above table is a statement of current intentions. Investors should note that the allocation of funds set out in the above table may change depending on a number of factors. In light of this the Board reserves the right to alter the way the funds are applied.

<sup>2</sup> Research and Development Expenditure remains in line with expenditure identified in the prospectus however includes the addition of the Stage 1 investment in the Sparc Hydrogen JV and costs associated with an acceleration in the R&D program (as opposed to investment in manufacturing). This expenditure is not nett of R&D Tax Rebate/s.

**-ENDS-**

**Authorised for release by:** Mike Bartels, Managing Director.

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**About Sparc Technologies**

Sparc Technologies Limited (ASX: SPN) is a South Australian based company focused on the development of innovative technology with the objective of delivering sustainable commercial outcomes.

Graphene, which is a major focus for Sparc, is a 2-dimensional nano material made of carbon atoms arranged in a hexagonal pattern. It has an array of unique and powerful properties that can be exploited to either enhance existing product performance or provide the basis for disruptive technologies. Sparc is currently seeking to commercialise several graphene-based products within the Construction sector.

Sparc is also focussed on developing thermo-photocatalytic green hydrogen technology. This technology will deliver a process for commercially viable hydrogen that does not require solar and/or wind farms, nor electrolysis as is the norm with conventional green hydrogen.



## Appendix 4C

### Quarterly cash flow report for entities

subject to Listing Rule 4.7B

Name of entity		
Sparc Technologies Limited		
ABN		Quarter ended ("current quarter")
13 009 092 068		30 June 2022

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers	1	7
1.2	Payments for		
	(a) research and development	(382)	(2,056)
	(b) product manufacturing and operating costs		
	(c) advertising and marketing	(22)	(60)
	(d) leased assets	(41)	(137)
	(e) staff costs	(360)	(1,585)
	(f) administration and corporate costs	(371)	(1,022)
	(g) exploration and evaluation (if expensed)		
1.3	Dividends received (see note 3)		
1.4	Interest received		
1.5	Interest and other costs of finance paid		
1.6	Income taxes paid		
1.7	Government grants and tax incentives		200
1.8	Other (provide details if material)		
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(1,175)</b>	<b>(4,653)</b>



Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire or for:		
	(a) entities		
	(b) businesses	0	0
	(c) property, plant and equipment	(60)	(186)
	(d) investments		
	(e) intellectual property		(2)
	(f) other non-current assets		(0)
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.3	Cash flows from loans to other entities	512	512
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(60)</b>	<b>324</b>
<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		2,801
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		971
3.4	Transaction costs related to issues of equity securities or convertible debt securities		(240)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		



Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>		<b>3,532</b>
<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	3,371	2,933
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,175)	(4,653)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(60)	324
<b>4.4</b>	<b>Net cash from / (used in) financing activities (item 3.10 above)</b>	<b>0</b>	<b>3,532</b>
4.5	Effect of movement in exchange rates on cash held		
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>2,136</b>	<b>2,136</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	2,136	3,371
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>2,136</b>	<b>3,371</b>





6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	138
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities		
7.2	Credit standby arrangements		
7.3	Other (please specify)		
7.4	<b>Total financing facilities</b>		
7.5	<b>Unused financing facilities available at quarter end</b>		0
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(1,175)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,136
8.3	Unused finance facilities available at quarter end (item 7.5)	0
8.4	Total available funding (item 8.2 + item 8.3)	2,136
8.5	<b>Estimated quarters of funding available (item 8.4 divided by item 8.1)</b>	1.82
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>		



8.6	If item 8.5 is less than 2 quarters, please provide answers to the following questions:
8.6.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?
	Answer: Yes, full expectation to continue operating at current level. FY21 R & D rebate approved and to be received within Q3 CY 22.
8.6.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?
	Answer: The company has capacity under Listing Rule 7.1 and 7.1A. to place additional securities for the purpose of raising additional capital. The company has successfully raised funds in the past and will assess capital raising avenues as and when required.
8.6.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?
	Answer: In light of the above factors, the Company believes that it will have sufficient cash to fund its existing activities. The Company's Board and Management is focused on meeting its current objectives and confirm that it is in compliance with ASX Listing Rules, in particular, Listing Rule 3.1.
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: .....29 July 2022.....

Authorised by: .....the Board.....  
(Name of body or officer authorising release – see note 4)

### Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.



3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.