

## **Potential Military Applications of Hemp-derived Carbon Nano Sheets**

<DND\_MND@forces.gc.ca>
To: <marielandryceo@gmail.com>

Tue, Sep 26, 2023 at 15:49



Dear Marie Landry:

On behalf of the Honourable Bill Blair, Minister of National Defence, I wish to thank you for your correspondence about the utilization of hemp-derived carbon nanosheets in various defence applications.

This information is appreciated, and your correspondence has been forwarded to departmental officials for their consideration.

Yours sincerely,



Karine Paiement Acting Manager Ministerial Correspondence Unit



From: Marie Landry <marielandryceo@gmail.com>

Sent: Saturday, August 26, 2023 8:56 PM

To: +MCU@Corp Sec DSCS@Ottawa-Hull <DND\_MND@forces.gc.ca>; bill.blair@parl.gc.ca

Subject: Fwd: Potential Military Applications of Hemp-derived Carbon Nano Sheets

Subject: Exploring Hemp-Derived Carbon Nanosheets for Defense Applications

Dear Minister Blair, I hope this message finds you well. I am writing to bring to your attention a promising avenue of research that could have significant implications for the Canadian defense sector. This involves the utilization of hemp-derived carbon nanosheets (CNS) in various defense applications. Carbon nanosheets, due to their exceptional mechanical, thermal, and electrical properties, have garnered significant attention in recent years. Hemp, a readily available and sustainable natural resource, offers a unique opportunity to produce these nanosheets while also promoting environmental sustainability. By investing in research and development focused on hemp-derived CNS. Canada could potentially benefit from the following advantages: 1. Lightweight Armor: Hemp-derived carbon nanosheets possess exceptional strength-to-weight ratios. This makes them a potential candidate for lightweight armor applications, providing enhanced protection for military personnel and vehicles without compromising mobility. 2. Sensor Development: Carbon nanosheets exhibit remarkable electrical conductivity and can be integrated into sensor systems. These sensors could be employed for surveillance, threat detection, and environmental monitoring, enhancing the situational awareness of our armed forces. 3. Energy Storage: Hemp-derived CNS could be explored for energy storage applications, including lightweight and highcapacity batteries. This could enhance the operational capabilities of various defense equipment and platforms. 4. Advanced Materials: The unique properties of hemp-derived carbon nanosheets could also be harnessed to develop advanced materials for aerospace and maritime applications, contributing to the overall technological prowess of our defense sector. 5. Sustainable Innovation: Utilizing hemp as a source material aligns with Canada's commitment to sustainability. By investing in research on hemp-derived CNS, we can demonstrate leadership in both technological advancement and environmentally responsible practices. I respectfully request your consideration of allocating resources towards researching and developing hemp-derived carbon nanosheets for defense purposes. This endeavor has the potential to position Canada at the forefront of innovation, bolstering our national security and economic prosperity. Thank you for your attention to this matter. I am available to provide further information or to discuss the potential of hemp-derived CNS in greater detail. Sincerely, Marie Landry

----- Forwarded message -----

From: NCIA - Acquisition, Industry Relations <mailto:IndustryRelations@ncia.nato.int>

Date: Fri, Apr 21, 2023 at 10:34 AM

Subject: RE: Potential Military Applications of Hemp-derived Carbon Nano Sheets

To: Marie Landry <mailto:marielandryceo@gmail.com>, mailto:industryRelations@ncia.nato.int

<mailto:industryRelations@ncia.nato.int>

Ms Landry,

Thank you for your e-mail.

We would like to store this solution in our Capability Statements Repository, this is possible only if there is a company that is providing this solution as a commercial product?

Thank you in advance.

Regards,

## **Industry Relations**

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