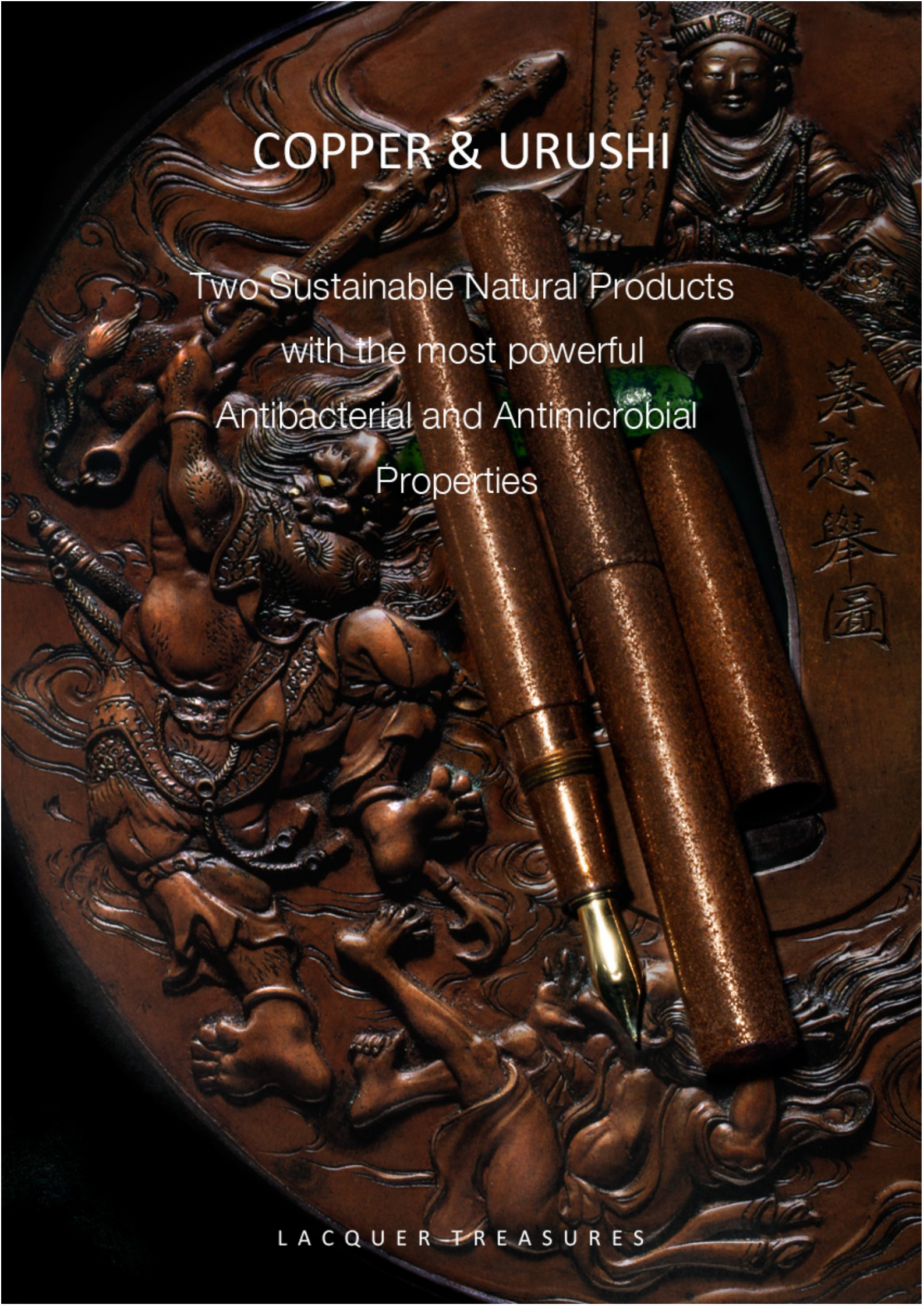

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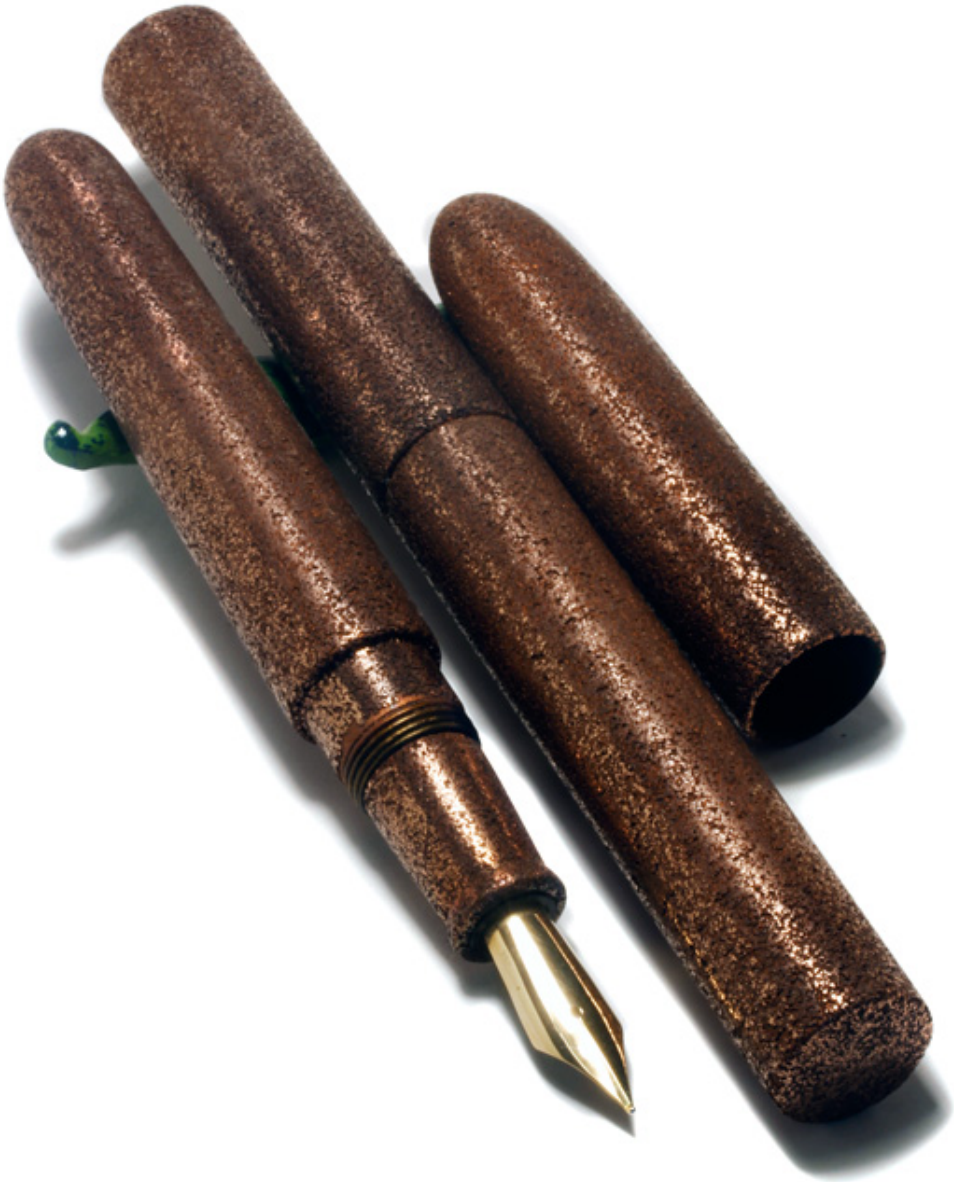

DÔ Nuri - Copper Lacquer Fountain Pen

The Pen body made from Ebonite. The stone-like suface made by sprinkling purest reddish Copper grain into urushi lacquer. JOWO Nib and Converter

SHIBUI (Rounded Ends)	BÔ (Flat Ends)
Length:	150.00 mm
Length Barrel + Nib:	135.00 mm
Diameter Section:	12.50 mm
Weight:	27 gr

Price with Gold Nib	USD 680.-
Price with Steel Nib	USD 580.-

Antimicrobial and Antibacterial Properties of Urushi

Research article
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RDE Restorative Dentistry & Endodontics

Antibacterial effect of urushiol on *E. faecalis* as a root canal irrigant

Table 1 Antibacterial effect of coating film of lacquer to staphylococcus aureus

sample	count of viable bacteria		decrease in count of bacteria
	at the time of inoculation	after 24 hours	
Japanese lacquer	4.3×10^4	$<1.0\times10^2$	100
Chengkou lacquer		$<1.0\times10^2$	100
Maopo lacquer		$<1.0\times10^2$	100
Bijie lacquer		$<1.0\times10^2$	100
Vietnam lacquer		$<1.0\times10^4$	–

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Conference information

Antibacterial Activities of Oriental Lacquer and Related Materials for Colon Bacillus and Others

*Naotaka Ode, Toshio Ogawa, Satoshi Osawa

Author information

Keywords: Oriental lacquer, Lacquer Film, Antibacterial activites, Colon Bacillus

In vitro Antibacterial and Morphological Effects of the Urushiol Component of the Sap of the Korean lacquer tree (Rhus vernicifera Stokes) on Helicobacter pylori

Hyun Soo Kim

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Intrinsic Hydrophobic Cairnlike Multilayer Films for Antibacterial Effect with Enhanced Durability

Hyejoong Jeong†, Jiwoong Heo†, Boram Son‡, Daheui Choi†, Tai Hyun Park†§, Minwook Chang∥, and Jinkee Hong*†

View Author Information

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Urushi is a natural lacquer obtained from the lacquer tree (Reus Verniciflua).
Similar to the rubber harvest, cuts are made in the bark of 7 to 10-year-old trees. The raw sap that runs out is collected, between 60 and 120 grams per tree. After the harvest the trees are leached out and felled. The harvest takes place between June and October, and the best quality is harvested in July and August. In the liquid state, the raw lacquer is strongly allergenic. Once dried, this effect disappears and the lacquer has a strong antibacterial effect. This is why Urushi is used commonly in Japanese cuisine implements, such as chopsticks, soup bowls, plates and the likes.

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Antimicrobial and Antibacterial Properties of Copper

SCIENCE

Copper's Virus-Killing Powers Were Known Even to the Ancients

The SARS-CoV-2 virus endures for days on plastic or metal but disintegrates soon after landing on copper surfaces. Here's why

Jim Morrison
Science Correspondent
April 14, 2020

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December 11, 2020
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Copper's Antimicrobial Properties Might Treat Bacterial Diseases

BY ERIC BOCK

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Antimicrobial properties of copper

From Wikipedia, the free encyclopedia

Copper and its alloys (brasses, bronzes, cupronickel, copper-nickel-zinc, and others) are natural antimicrobial materials. Ancient civilizations exploited the **antimicrobial properties of copper** long before the concept of microbes became understood in the nineteenth century.[1][2][3][unreliable medical source?] In addition to several copper medicinal preparations, it was also observed centuries ago that water contained in copper vessels or transported in copper conveyance systems was of better quality (i.e., no or little visible slime or biofouling formation) than water contained or transported in other materials.[4]

The antimicrobial properties of copper are still under active investigation. Molecular mechanisms responsible for the antibacterial action of copper have been a subject of intensive research. Scientists are also actively demonstrating the intrinsic efficacy of copper alloy "touch surfaces" to destroy a wide range of microorganisms that threaten public health.[5]

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Mechanisms of action [edit]

In 1852 Victor Burq discovered those working with copper had far fewer deaths to cholera than anyone else, and did extensive research this. In 1867 he presented his findings to the French Academies of Science and Medicine, informing them that putting copper preventing someone from getting cholera.[6]

Science suggests that Hylayer antimicrobial copper kills bacteria with a multifaceted attack. The U.S. National Institution of Health claims that COVID-19 survives on plastic and stainless steel for up to 72 hours, but only 4 hours on copper.

Antimicrobial Properties of Copper

Copper Fact 1
In February 2008, the U.S. Environmental Protection Agency (EPA) approved the registration of 275 antimicrobial copper alloys. By April 2011, that number expanded to 355. This permits public health claims that copper, brass and bronze are capable of killing harmful, potentially deadly bacteria. Copper is the Nrst solid surface material to receive this type of EPA registration, which is supported by extensive antimicrobial ePcacy testing.

U.S. EPA registration is based on independent laboratory tests showing that, when cleaned regularly, copper, brass and bronze kill greater than 99.9% of the following bacteria within 2 hours of exposure: Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant Enterococcus faecalis (VRE), Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa, and E. coli O157:H7.

Copper Fact 2
The Centers for Disease Control and Prevention (CDC) estimates that infections acquired in U.S. hospitals a\ect two million individuals every year and result in nearly 100,000 deaths annually. The use of copper alloys for frequently touched surfaces, as a supplement to existing CDC-prescribed hand-washing and disinfection regimens, has far-reaching implications.

Copper Fact 3
Potential uses of the antimicrobial alloys where they can help reduce the amount of disease-causing bacteria in healthcare facilities include: door and furniture hardware, bed rails, over-bed trays, intravenous (IV) stands, dispensers, faucets, sinks and work stations.

Copper Fact 4
Initial studies at the University of Southampton, UK, and tests subsequently performed at ATS-Labs in Eagan, Minnesota, for the EPA show that copper-base alloys containing 65% or more copper are

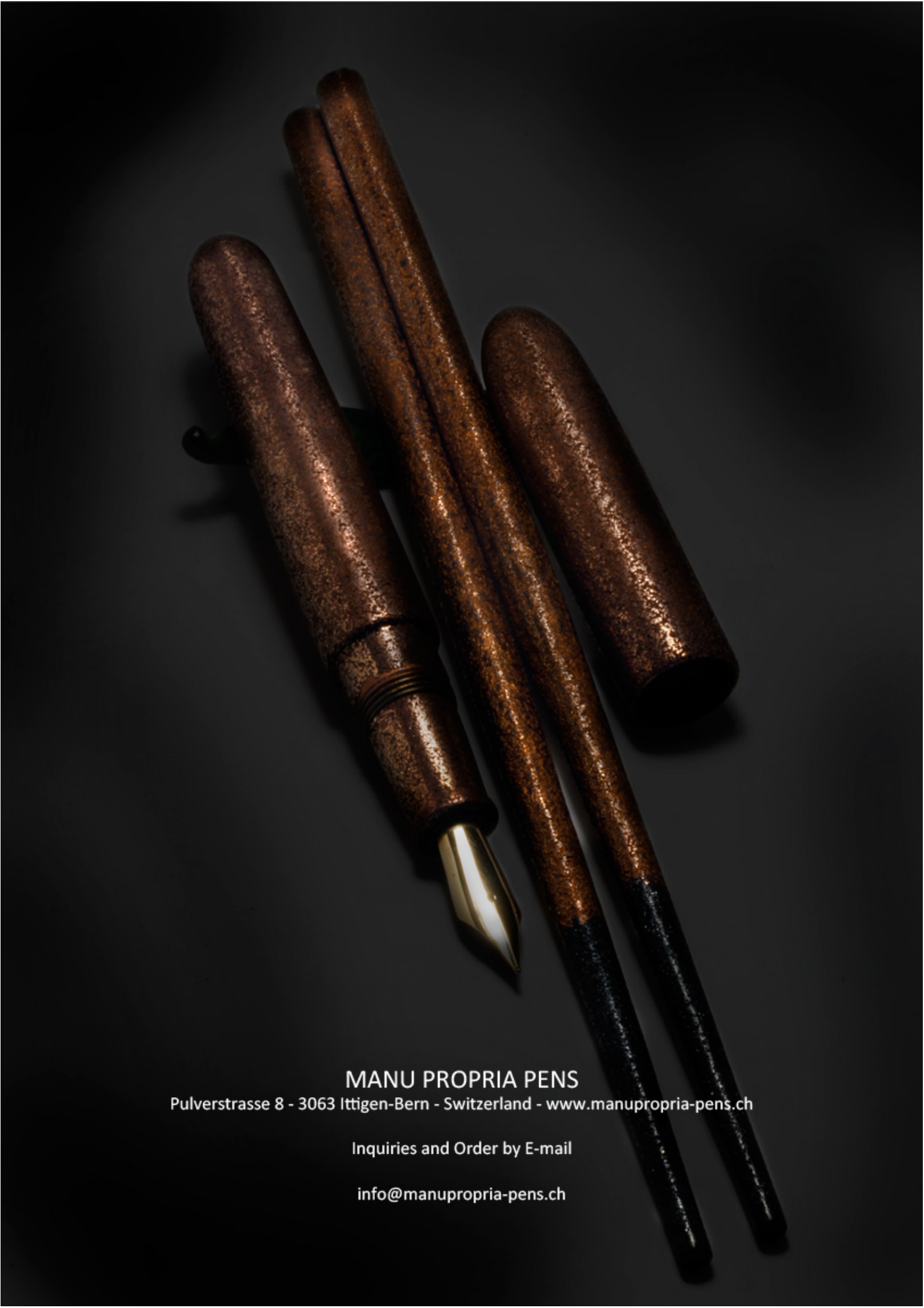
e\ective against:

- Methicillin-resistant Staphylococcus aureus (MRSA)
- Staphylococcus aureus
- Vancomycin-resistant Enterococcus faecalis (VRE)
- Enterobacter aerogenes
- Escherichia coli O157:H7
- Pseudomonas aeruginosa.

These bacteria are considered to be representative of the most dangerous pathogens capable of causing severe and often fatal infections.

The EPA studies show that on copper alloy surfaces, greater than 99.9% of MRSA, as well as the other bacteria shown above, are killed within two hours at room temperature.

Copper has been used for healing and medicinal purposes for thousands of years. Ancient cultures made use of Copper as a healing mineral with healing properties beneficial to the internal and external bodies. Copper is the third most abundant trace mineral that can be found in the human body and It's transported throughout the body with the help of proteins in the bloodstream. The liver and the human brain also contain the largest amount of copper. It can be used in the treatment of skin diseases and wounds. Copper can be used to improve blood circulation, to increase overall physical energy, to detoxify the body It's an essential component of melanin, which gives color to the eyes, hair, and skin. Copper is responsible for keeping the hair from turning grey or thinning out.



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